Technology Landscape
High-Power SoC – Automotive
Application

**Case Study** 

Client	Fortune 500 leading semiconductor solution provider headquartered in Europe
Industry	Automotive, industrial, power conversion, and digital security solution
Products	Microelectronics and technology solution

#### Context

■ The client wants to understand the landscape of techniques, trends, and research on SoC ASIC design with high power consumption (>3W). Primarily, the study focuses on the design of high-power SoC with dimensional scaling of 28nm and below. It also includes solutions for high-power SoC designs for next-generation automotive MCU, along with an overview of patent filings.

# **Key Business Questions**

- References focusing on SoC ASIC design with high power consumption (>3W)
- Related references focusing on SoC ASIC design with high power consumption (no disclosure of specific values of power consumption)

## **Engagement Scope**

- 1 Patents Filed and Market Trends
- Detailed overview of patents filed in the past 7 years by academicians and corporates
- Overview of trends in new SoC design architectures and packaging solutions
- Information on the designing of SoC with advanced processing nodes and efficient power consumption

- 2 Scientific Literature Scenario
- Advance solutions for high-power SoC design
- Packaging solutions for high-power SoC design and implementation according to the automotive standards
- Overview solutions/techniques for effective consumption of power categorized into 4 clusters: power management unit, static power, dynamic power, and power distribution

- 3 Key Vendor Analysis
- Competitive analysis of key players and number of patents filed by them
- 4 Key Findings and Conclusions
  - Detailed overview of techniques, trends, and research on SoC ASIC design with high power consumption (>3W)

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# **Research Methodology**

#### **Secondary Research**

- Conducted desk research to understand the overall market scenario
- Referred to paid databases and identified patents for SoC ASIC design with high power consumption

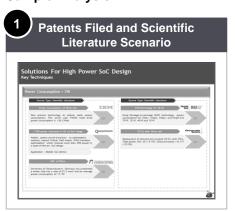
## **Primary Research**

 50+ telephonic interviews conducted with manufacturers, distributors, industry experts, retailers, and consumers

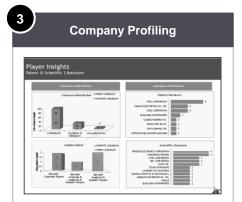
#### **Benefits to Client**

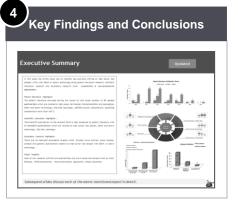
- Understand the landscape of techniques, trends, and research on SoC ASIC design with high power consumption
- Overview of patents filed and scientific literature published in the last 7 years on highpower SoC ASIC design
- Competitive analysis of key players operating in the market

# Sample Analysis









# Thank you

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