BLUEBINARIES

BlueBinaries Engineering & Solution Pvt. Ltd.

Lighting System Development

Inspired by Future Mobility

TECHNOLOGY TRENDS: LIGHTING THE WAY

Drivers

Digitalization	Personalization	Automation	Intelligence

Challenges

Technology Disruption
(DMD, OLED, Laser MOEMS etc..

Resource paucity
(Optics, Software development
Cybersecurity & Functional safety)

Cost & Time to Market

Opportunities

Modular
Design

Ready made
Solutions

Out Sourcing

Global Partnership
Ecosystem
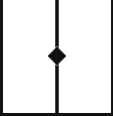
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Enabling transition into Future of MOBILITY

30+ years of Global expertise in Vehicle E/E, Systems & Technology and Product Digitization

20+ Global Customers

250+ Engineers

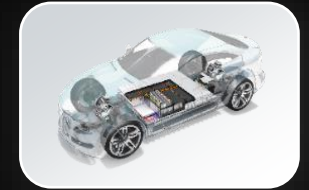**Electrical Systems**

Digital Cockpit

Chassis, Safety & Autonomous Systems

Electrification systems

Body & Convenience

Lighting

In close proximity to customers in
USA, EUROPE, UK & INDIA

Ready to use Component designs, Software Algorithms & Test facilities

One Stop Shop
Lighting System
Development
& Technology Partner
enabling your Transition
Into Future Mobility

One Stop Engineering Partner For Lighting Systems Development

Components / Systems Experience

- Headlights
- Rear Lighting
- DRL & Fog Lamps
- CHMSL
- Consoles
- Ambient Lighting

Service Offerings

- Benchmarking & Market Analysis
- Worldwide regulation study
- Concept Development
- Studio Engineering
- Design Engineering (CAD & DFx)
- FEA & CFD Simulation
- Optics Design & Simulation
- Electronics Development (SW & HW)
- Proto & Tooling Support
- Testing & Homologation
- VAVE

Diverse Technology Exposure

- Full LED System
- Xenon AFS
- Matrix Beam
- Ambient Light
- Sequential Turn
- RGB Projectors

What You will get!

- End to End Design Capability & Global Experience
- Engagement Agility
- Cost Competitive design
- Partnership Ecosystem
- Ready to Use Infrastructure & Solutions

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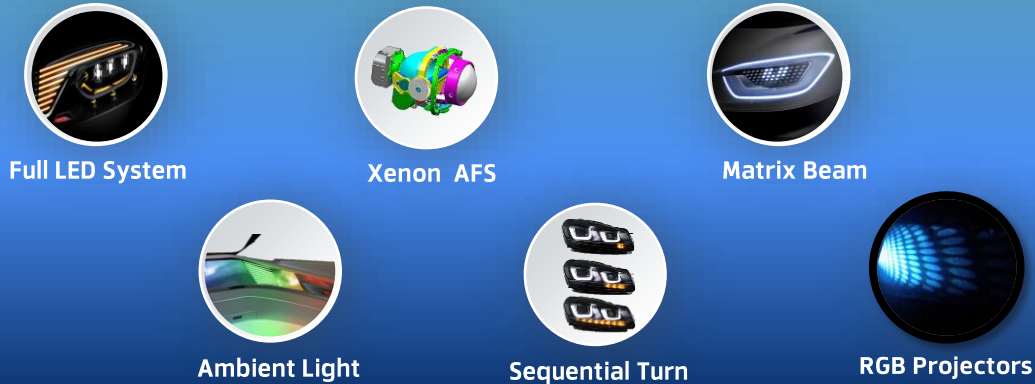
Concept Development – Intelligent Interior Lighting Module

Solution Overview

Intelligent Interior Lighting ECU is one of the Turn Key solution for any customer where it can be easily integrate the ECU to their vehicle architecture with minimal change in the SW. Major Feature of the ECU:

- All Interior Lights functions controlled in single ECU
- AUTOSAR based SW Architecture
- Model Based Application SW
- Functional Safety – ASIL B
- CAN, LIN & SPI Protocols
- Bootloader & Diagnostic
- More than 200 RGB LED'S can be Managed

Functions Realized

- Welcome/Leaving scenario
- Charge status display
- Emergency Brake Assist
- Lane Change Assistant
- Navigation
- Blind Spot Warning

- Lock/ Unlock
- Drive Mode Change
- Ambient Light
- courtesy Lamp (Dome, Trunk, vanity, puddle)

Key Highlights & Advantages
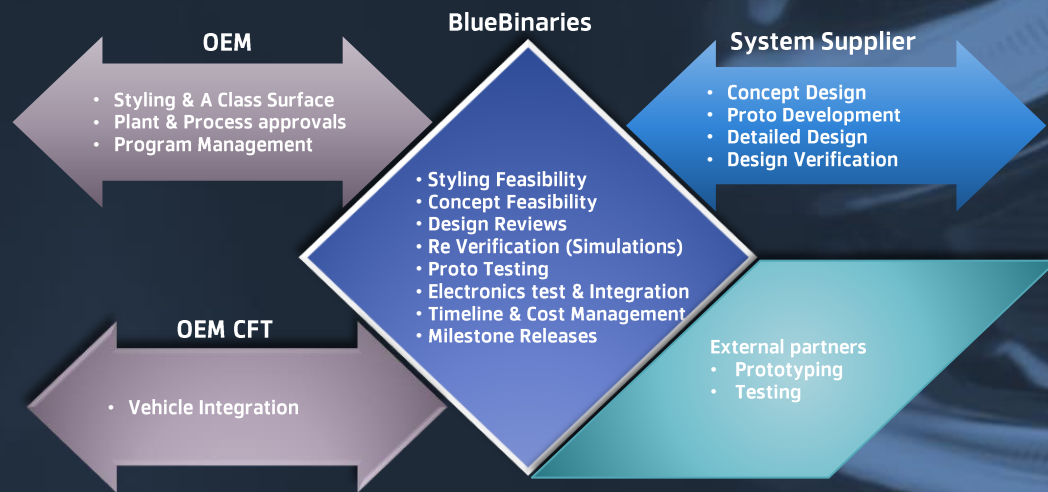
- Scalability of function up to 25
- Adaptable to any type of vehicle architecture
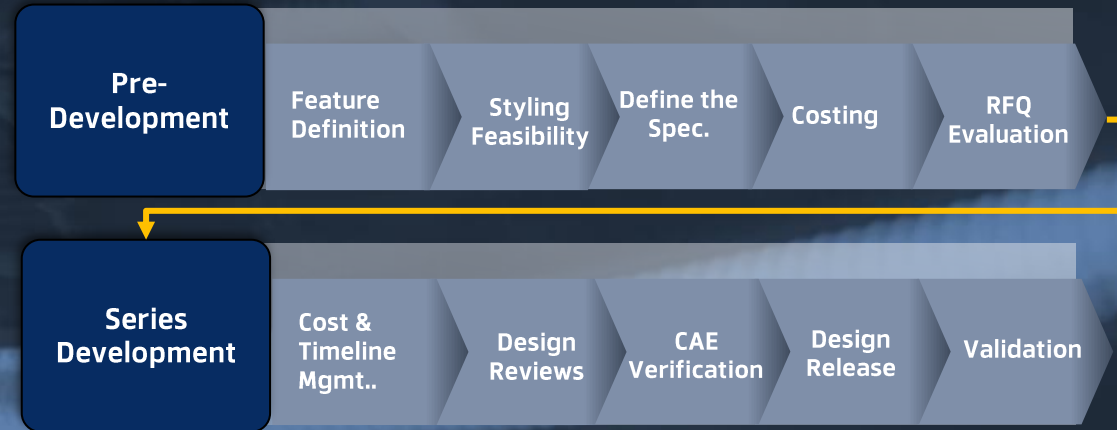- Easy to manage variants and upgrades with out Hardware Change

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PROJECT OVERVIEW

OEM
- Styling & A Class Surface
- Plant & Process approvals
- Program Management

BlueBinaries
- Styling Feasibility
- Concept Feasibility
- Design Reviews
- Re Verification (Simulations)
- Proto Testing
- Electronics test & Integration
- Timeline & Cost Management
- Milestone Releases

System Supplier
- Concept Design
- Proto Development
- Detailed Design
- Design Verification

OEM CFT
- Vehicle Integration

External partners
- Prototyping
- Testing

Product definition → Pre-development → Concept & Detailing → Build Support → Qualification → **Production**

SCOPE OF ACTIVITIES

Pre-Development

Feature Definition	Styling Feasibility	Define the Spec.	Costing	RFQ Evaluation

Series Development

Cost & Timeline Mgmt..	Design Reviews	CAE Verification	Design Release	Validation

PRODUCT TYPES AND TECHNOLOGY

- Full LED Headlamp – Main Function Reflector Type
- Full LED Headlamp – Main Function Projector Type
- Full LED Rear Lamp – Bulb & LED
- Bulb Version Head Lamp – H1 & H7
- Fog Lamps – H16, H8 & LED

VALUE DELIVERED

Provided a one stop solution to client supporting from requirement till qualification with expert resources and ready to use infrastructure in Opto – Mechanical design, Electronics (SW&HW) Development, CAE and Validation

Thank you

BlueBinaries

Electrification

Vehicle Electronics

ADAS

Telematics

Connected

Infotainment

Inspired By Future Mobility

BlueBinaries

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