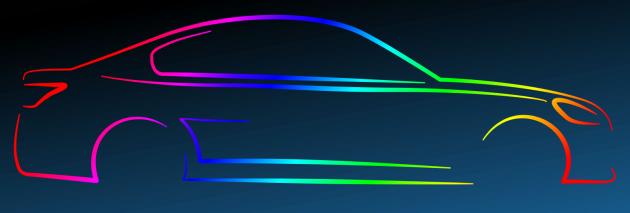


# **Company Overview**



CONNECTIVITY FOR AUTOMOTIVE LIGHT AND VISION

### **Inova Semiconductors GmbH**



Private fabless semiconductor company

Headquarter: Munich, Germany

Founded 1999

Providing robust semiconductor connectivity solutions to the Automotive market.

25 year of experience in large volume deliveries of high end SerDes devices.





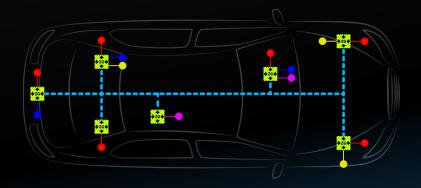
## **Our Mission**

Development, manufacturing and worldwide sales of innovative Gigabit link solutions for serial data communication and smart LED solutions for the Automotive Market.



## **Business segments and goals**



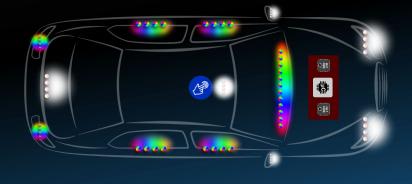


Provide Most Reliable Digital

Gigabit Multichannel SerDes and Networking

Solutions to the Automotive Market





Provide Smart LED Driver Chips and Light & Sensor Networks solutions for the Automotive Market

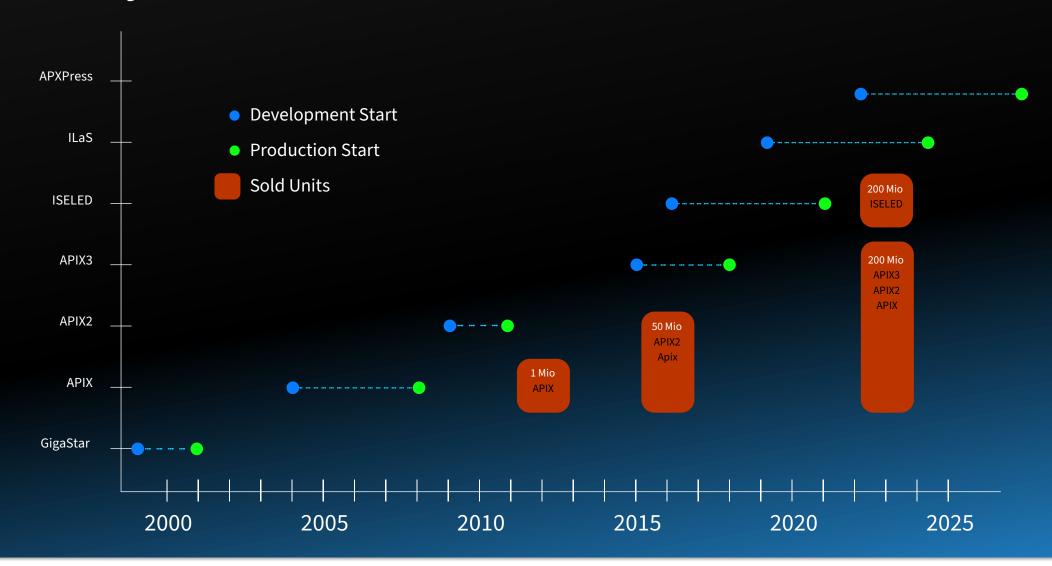






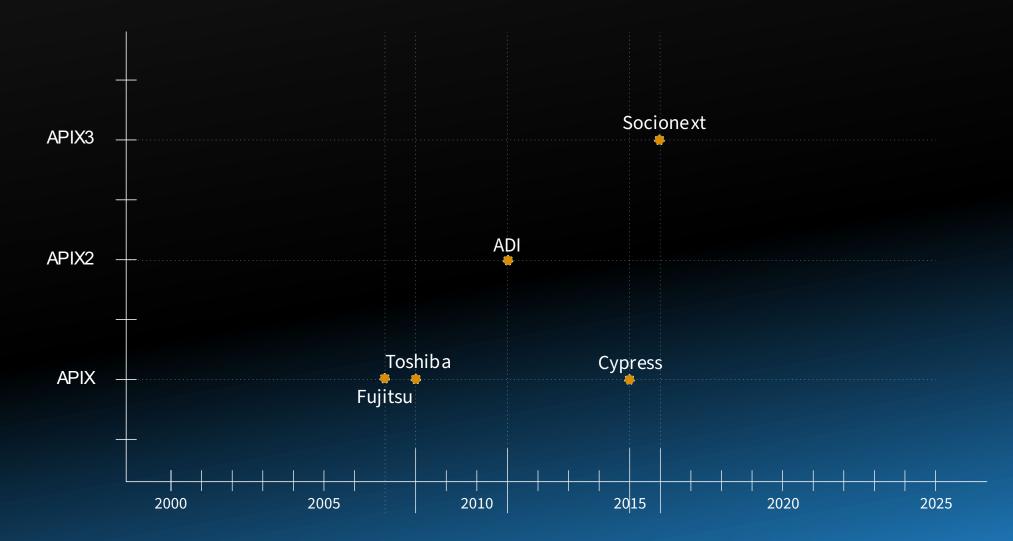


## History – Milestones





## History – Licensing





### **Global Presence**

























































































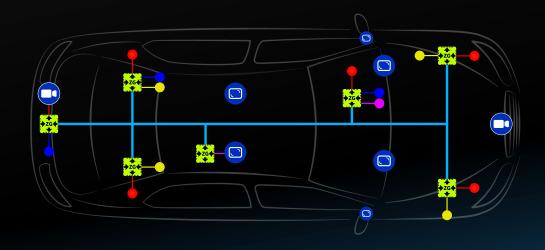




## SerDes – High Speed Communication



#### **Display Connectivity in vehicles**



Provide Most Reliable Digital
Gigabit Multichannel SerDes and
Network Solutions
to the Automotive Market

**Central Instrumentation Displays** 

**Cluster Displays** 

**Passenger Displays** 

**Console Displays** 

**Rear Seat Entertainment** 

**Mirror Replacement** 

**HVAC Displays** 



## **Automotive High-Speed Connectivity**



2008	2012	2018	2022
1 Gbps	3 Gbps	12 Gbps	12 Gbps
Video only	Multichannel HD Video Content Protection Ethernet Digital Audio	Multichannel UHD Video Content Protection Ethernet Digital Audio DSI & HDMI Digital Stream Compression Diagnostics Safety	Multichannel UHD Video Content Protection Ethernet Digital Audio DSI & HDMI Digital Stream Compression Diagnostics Safety Multistream Transport Display Port

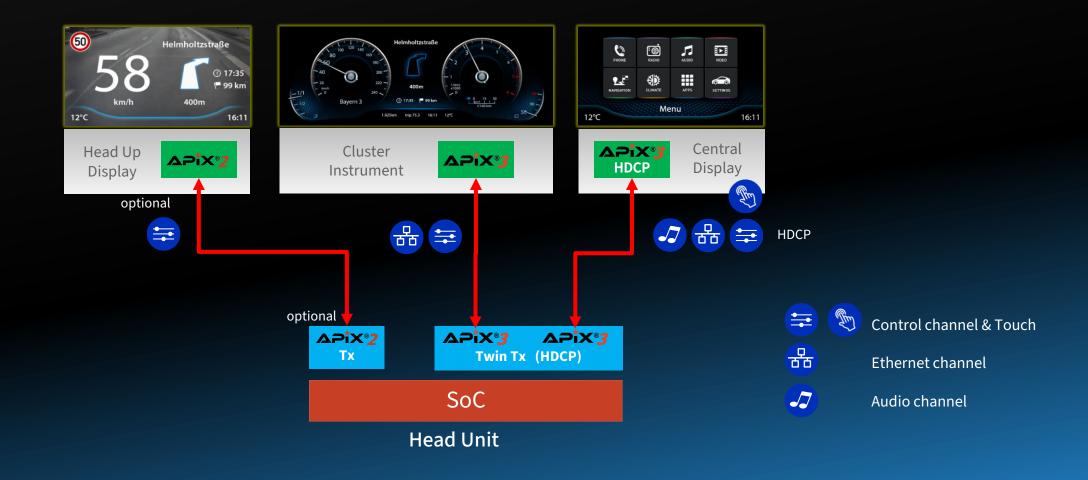
**Coming soon** 





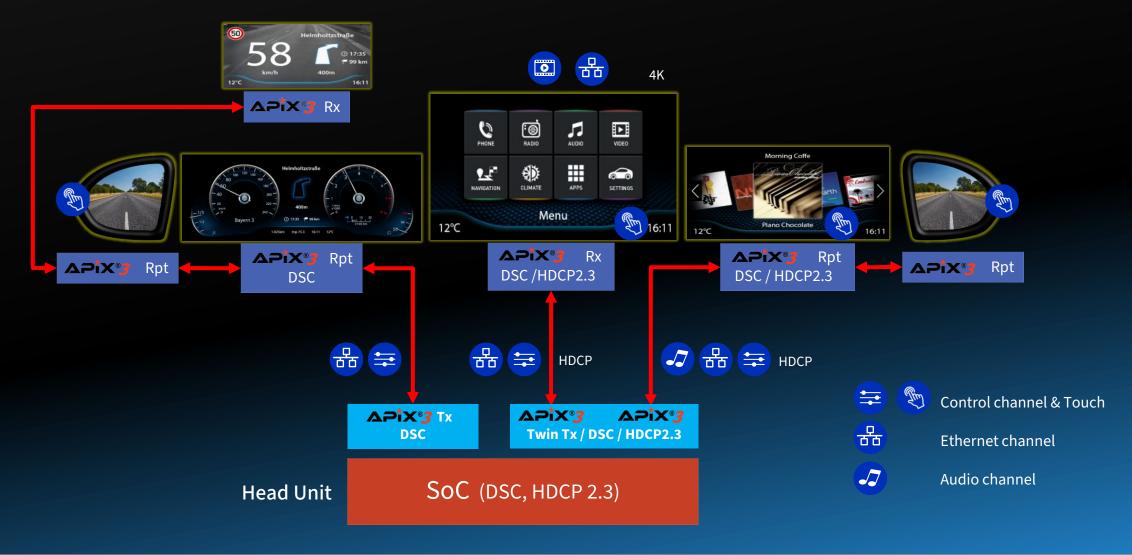


## **APIX** Entry Level Cockpit Application



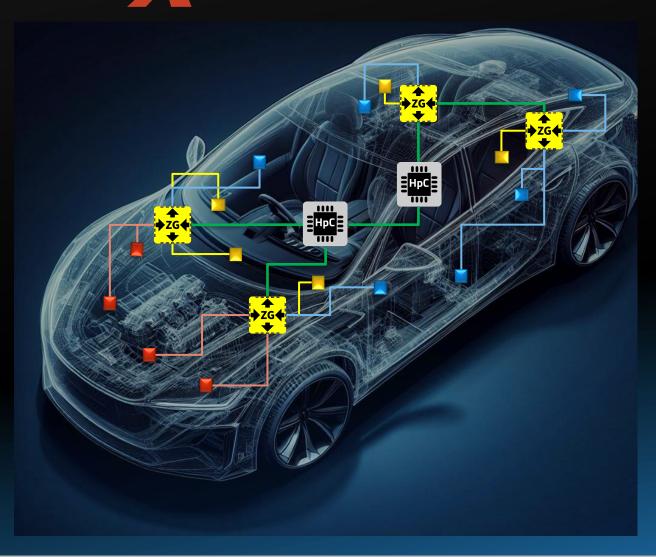


# APIX®3 High-End Pilar-to-Pilar Cockpit





# AP press Zonal architecture communication

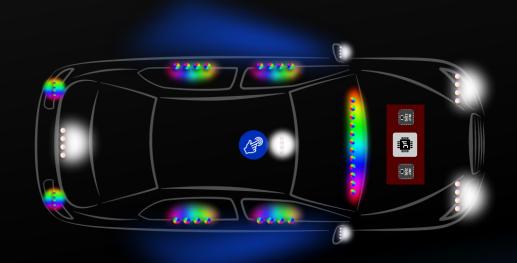


Migration of functionality from many domains to some zonal gateways (ZG) and central processor (HpC)

- Wide variety of data interfaces.
   Video, CAN, LIN, ASA, Audio, SPI, MII, I2C, I2S, DP, HDMI, APIX3, ISELED, LVDS, PCIe, MIPI-DSI
- Variable bandwiths kBps up to several GBps
- Flexible safety concepts
  Powertrain data vs. Infotainment Audio
- Weight reduction by data stream bundling 128 virtual data paths
- Designed for automotive
- Link interface with low power automotive Phy for 28dB/32GBps
- Software defined architecture
   Add / remove sensors and actuators



## **Business Segments Software Defined Lighting**

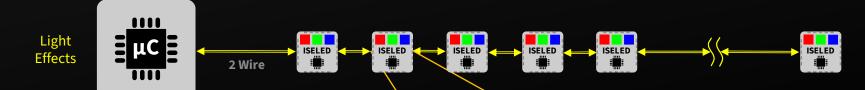


Providing Smart LED Driver Chips and Light & Sensor Networks solutions for the Automotive Market.

Roof Lighting
Functional Lighting
Mood Lighting
External Lighting
Welcome Lighting
Logo Lighting
Smart User Interface



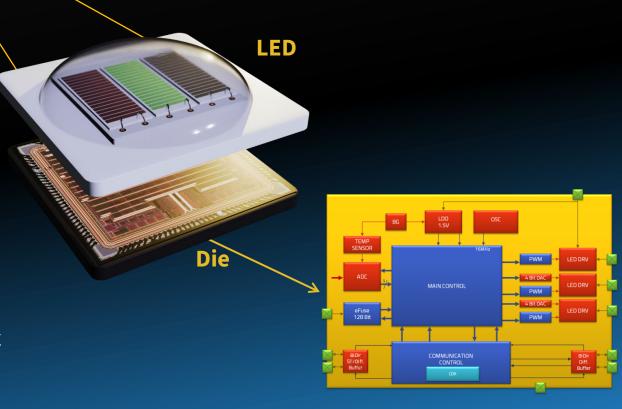
# **FLED** the smart LED Technology



#### **High Integration**

- ISELED Driver & Controller IC
- LEDs
- Optics
- Integrated oscillator, bandgap etc,
- Nearly no external components necessary
- Lowest System Costs

Daisy-Chaining of up to 4079 LEDs Calibration by LED manufacturer Bi-directional communication, Diagnostic

























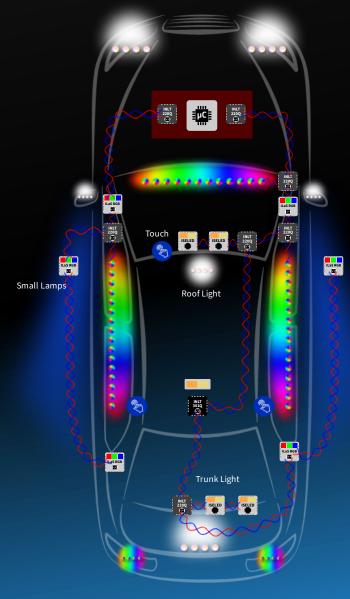






#### **Benefits:**

- Dynamic and functional lighting at highest speed
- Controllerless (no SW) subsystems
- Smart LEDs, sensors and actors on one "virtual bus"
- Easy synchronization of light scenaries
- Total freedom of placing LEDs, sensors and actors throughout the car
- No LED calibration necessary
- Diagnostic support
- Reduction of weight, harness, cost







## **Ecosystem Members**

The open Alliance provides complete system solutions for smart LED, initially targeting automotive interior lighting.

More information can be found at <a href="https://iseled.com/">https://iseled.com/</a>.





















































































































Wafer Probing **Packaging** Final Test Processing RoodMicrotec Nördlingen Microtec Main Supplier FAB 5 Woodlands Park Germany: **FAB 7 Woodlands Park** Taiwan: Nördlingen Chung-Li Taiwan: Chung-Li Singapore RoodMicrotec Nördlingen **Second Source** Singapore: **FAB 3e Tampines Airport\*** Taiwan: Taiwan: Chung-Li Kaohsiung \* Singapore: FAB 3e Tampines Airport\*

<sup>\*</sup> Transfer and Qualification required



# Semiconductors Supply Resilience

- Dual Supply Chain
- Multisource production
  - Different foundries
  - Geograhically different regions
- Support manufacturing with buffer stocks
- Contingency plan in place (since 2015)
- Never ever missed any delivery up to now







# **Manufacturing and Quality**

Inova is an ISO 9001:2015 certified company

All Foundries are IATF 16494 certified

Own quality and process management system

- AEC-Q100, PPAP, APQP etc. are all mandatory
- **Continuous improvement process**

High track records in delivery and quality

✓ A-supplier status with several customers

Inova's company values emphasize a strong focus on quality and being a consistent reliable partner to its customers.







#### **Standards**

Inova is working with several standards such as VESA, MIPI Alliance, HDMI, DisplayPort Technology, High-bandwidth Digital Content Protection, Open LDI, and DVN.

#### **Sales & Licensing**

We sell our products worldwide – directly and via distributors. We are also licensing our technologies worldwide.

#### Awards 2020-2024

Focus: Growth Champion 2021, 2023, 2024 & 2025, Innovation Champion 2024

Stifterverband: Innovative Through Research – Seal of Approval 2020/2021 & 2022/2023

F.A.Z. - Institut: Germany's Innovation Leader 2020/2022 & 2022/2023

Capital: Innovativste Unternehmen Deutschlands 2022

**Chip:** Digital Innovator 2021, 2022, 2023 & 2024

**SZ Institut:** Innovativer Arbeitgeber 2022, 2024, Innovativste und Krisensicherste Unternehmen 2023 & 2024

**DIND:** Arbeitgeber der Zukunft 2023

FT- Financial Times: Europe's long-term growth champions 2025















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<u>info@inova-semiconductors.de</u> www.inova-semiconductors.de General Manager: Robert Isele, Roland Neumann

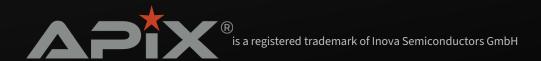
Commercial register of the local courts Registergericht München: HRB 125050

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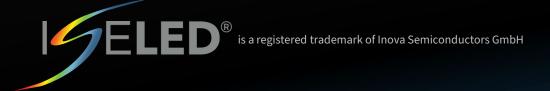
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