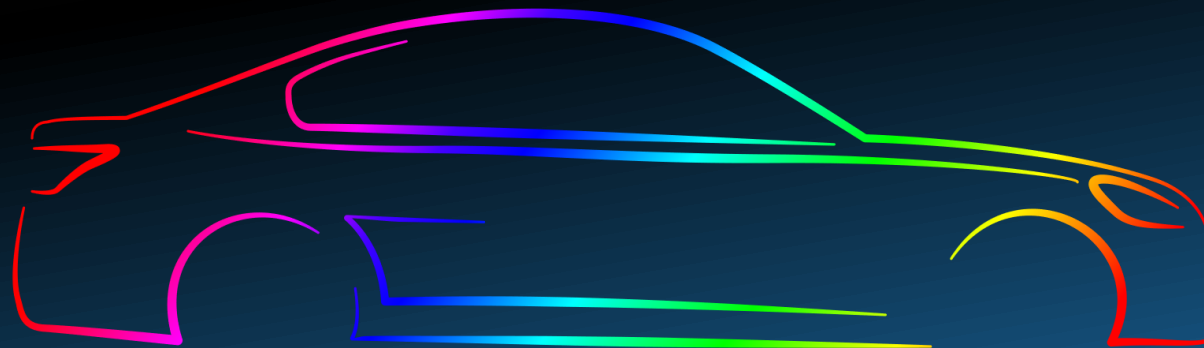




Company Overview



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.

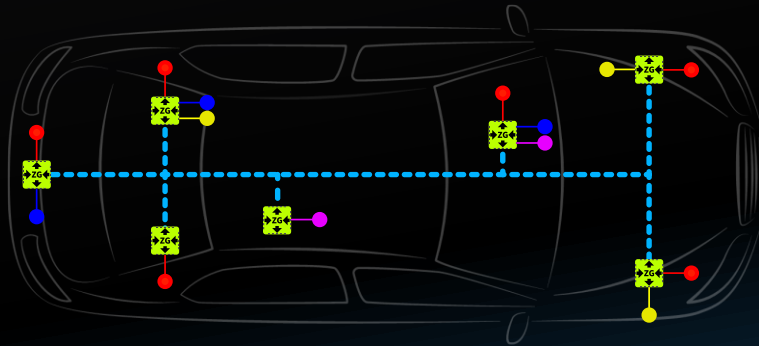


CONNECTIVITY FOR AUTOMOTIV LIGHT AND VISION

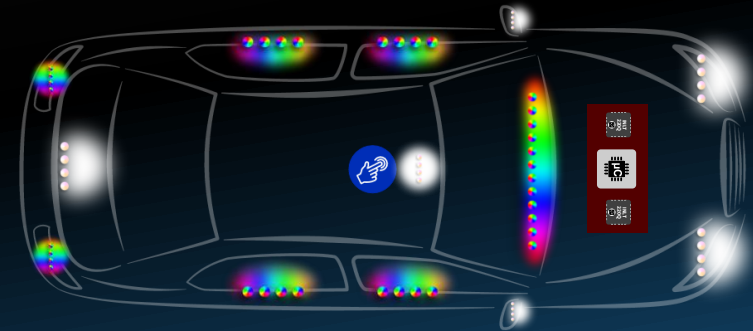
Our Mission

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



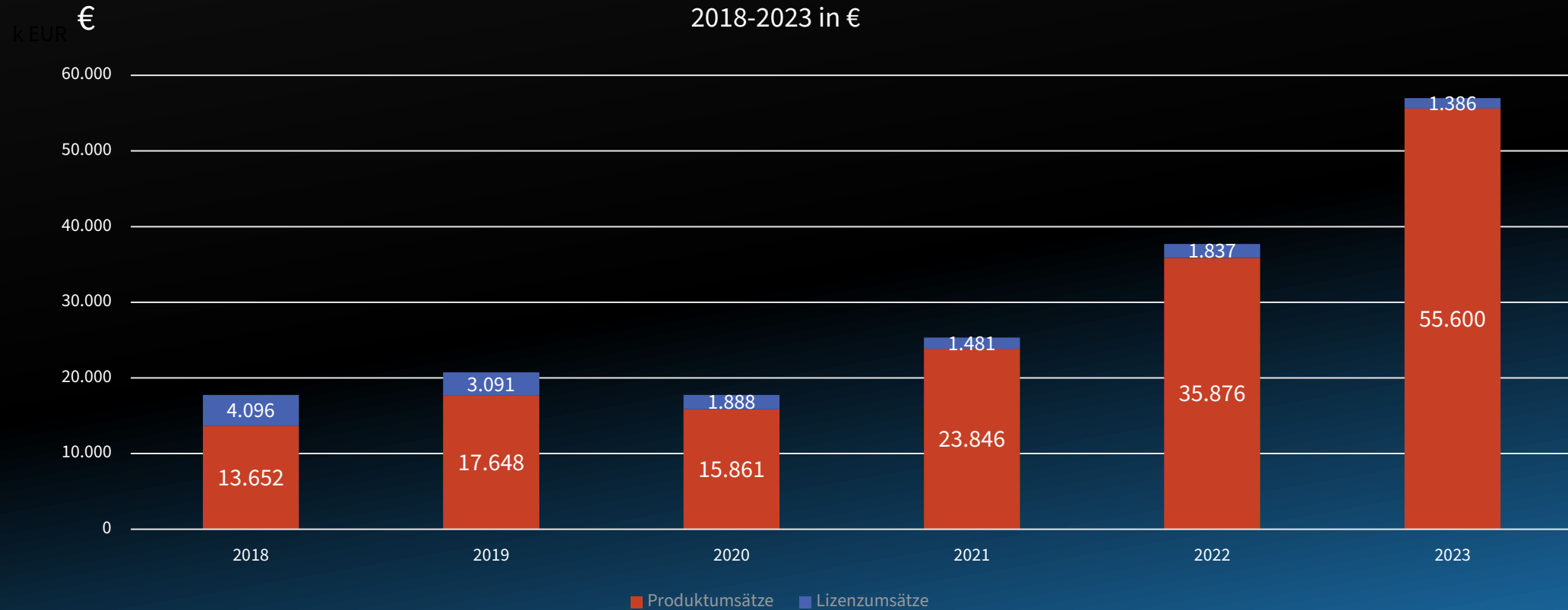
Provide Most **Reliable** Digital
Gigabit **Multichannel SerDes** and **Networking**
Solutions to the **Automotive Market**



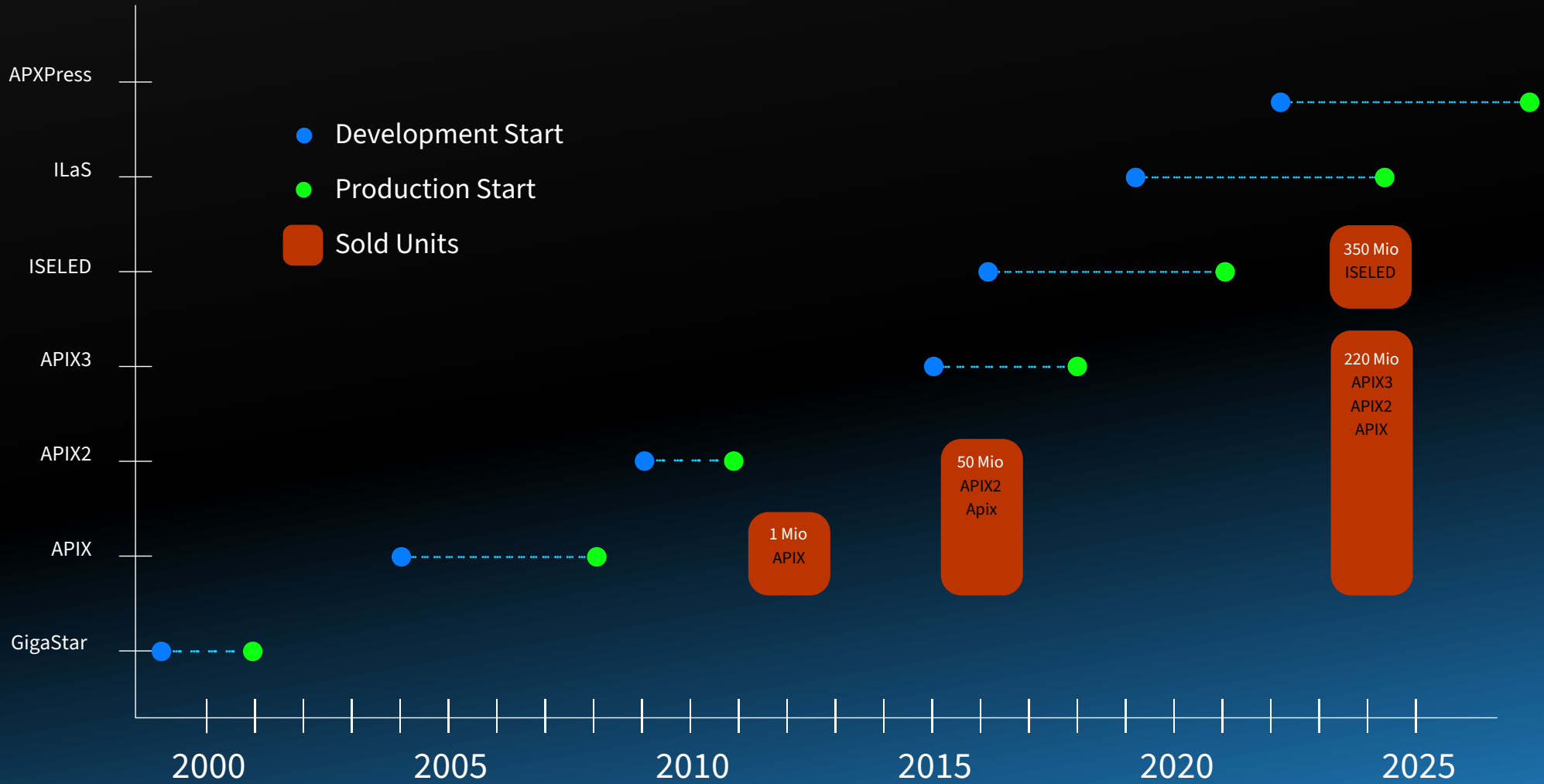
Provide **Smart LED Driver Chips** and
Light & Sensor Networks solutions
for the **Automotive Market**

Sales development Inova Semiconductors GmbH

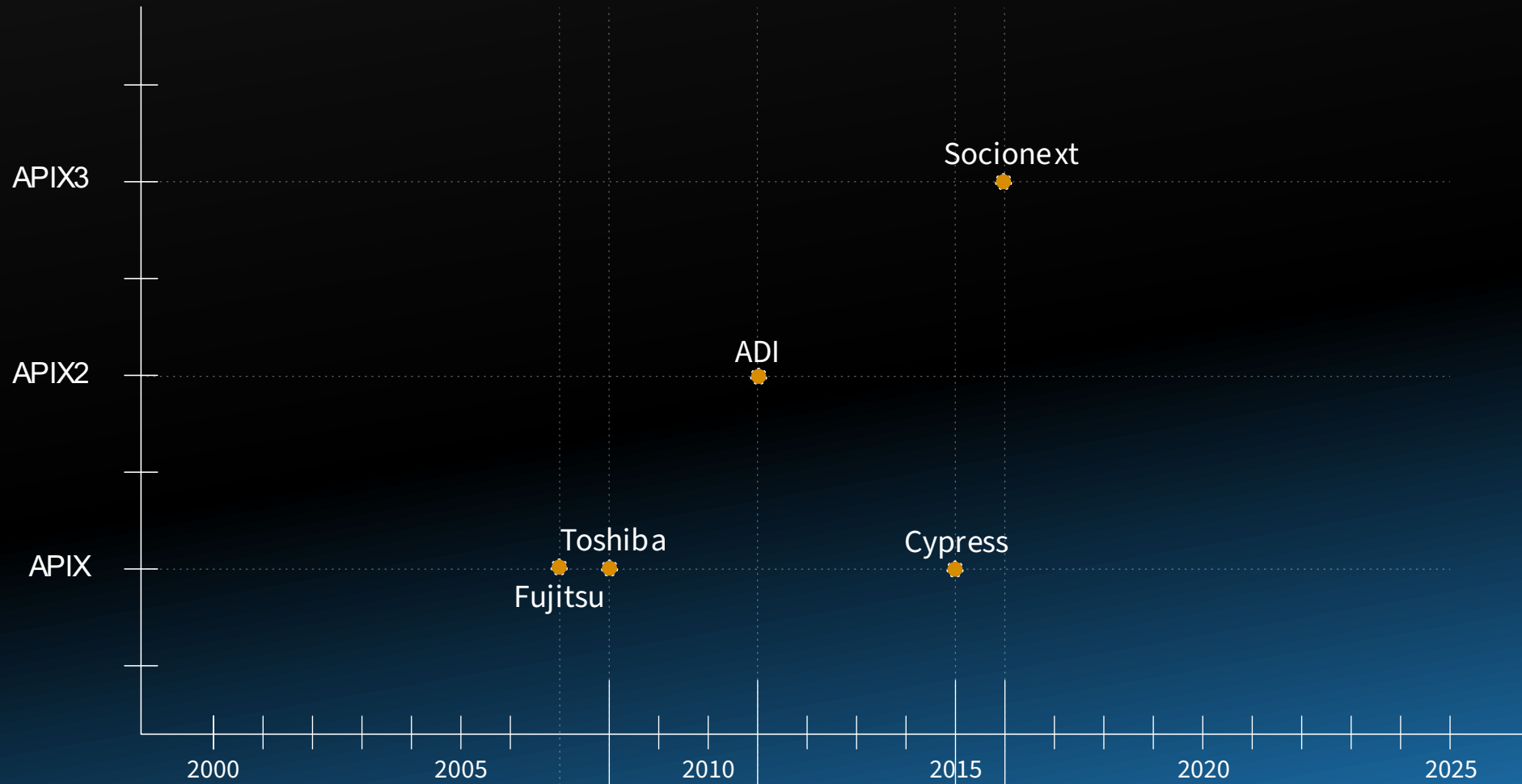
2018-2023 in €



History – Milestones



History – Licensing



Global Presence



Panasonic

DENSO



• APTIV •



INNOLUX



GARMIN

Continental



ALPSALPINE
Perfecting the Art of Electronics

KYOCERA

DOMINANT™
Opto Technologies
Innovating Illumination

EVERLIGHT

Lextar
A Member of Emrosar

LITEON®

CoAsia
ITSWELL

preh

Valeo

Yanfeng

FORVIA
HELLA

ALPSALPINE
Perfecting the Art of Electronics

ANTOLIN

Opmobility



ZEEKR



X P E N G



吉利汽车
GEELY AUTO



HONGQI
since 1958



CHANGAN



北汽新能源
BAIC BJEV



GENESIS



HYUNDAI



KIA



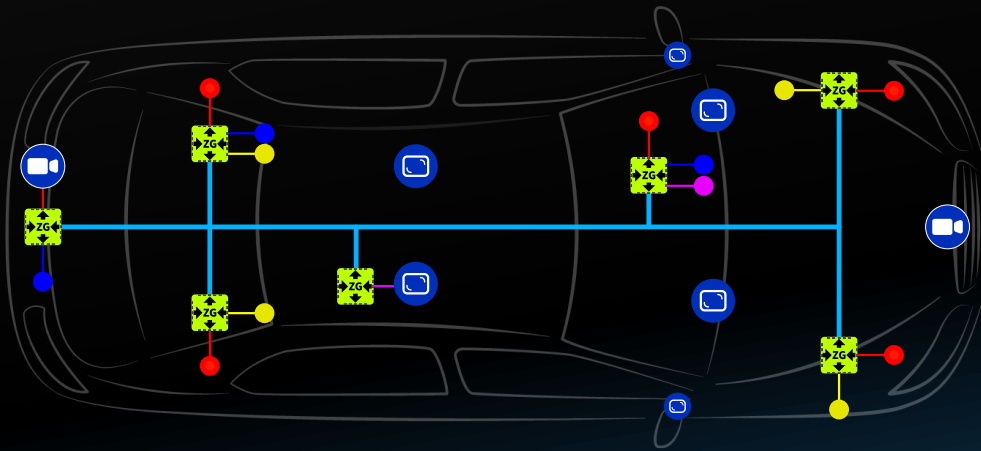
HONDA

AFEELA

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

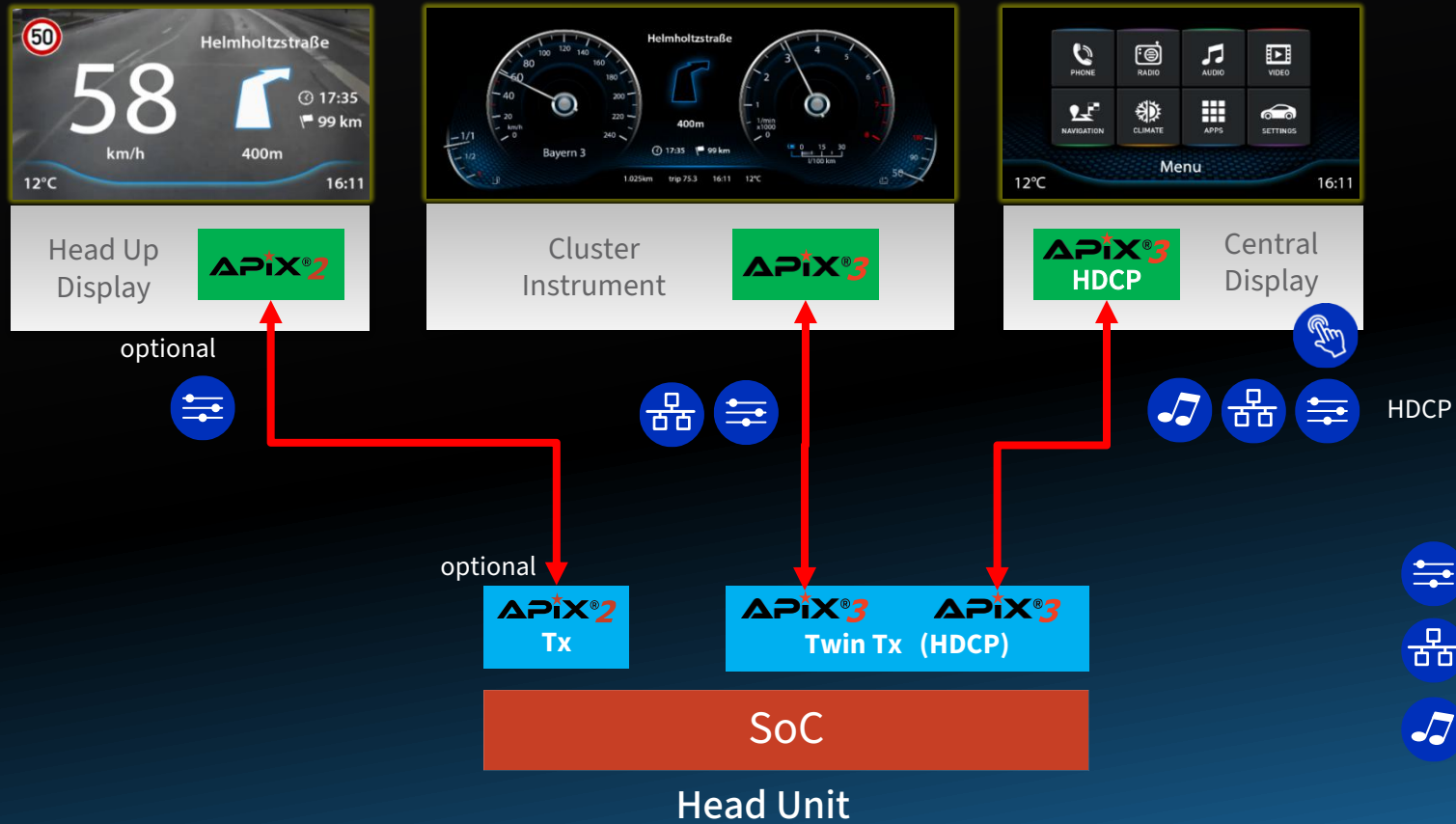


2008	2012	2018	2022
1 Gbps	3 Gbps	12 Gbps	12 Gbps
Video only	Multichannel HD Video Content Protection Ethernet Digital Audio	Multichannel UHD Video Content Protection Ethernet Digital Audio DSI & HDMI Digital Stream Compression Diagnostics Safety	Multichannel UHD Video Content Protection Ethernet Digital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

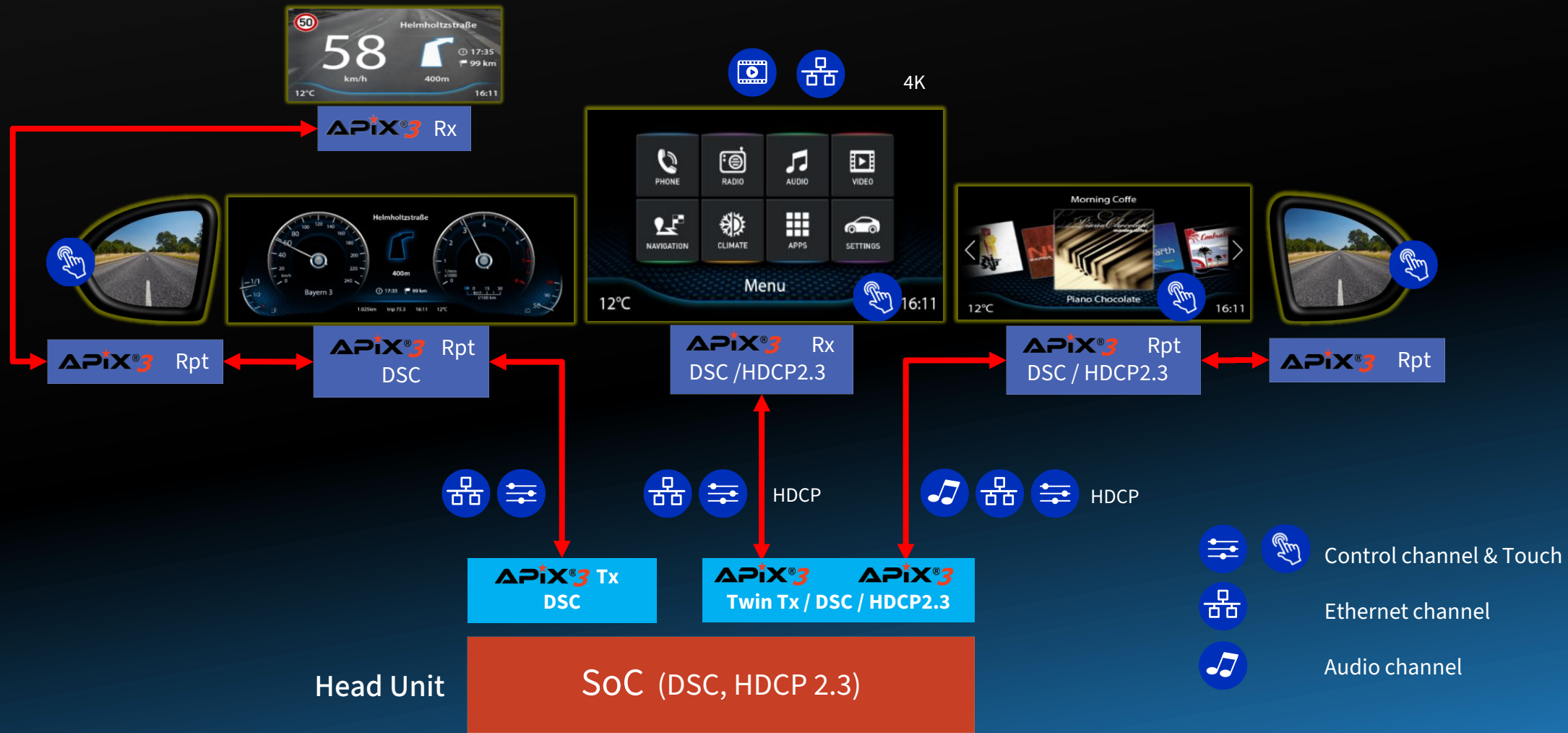
Coming soon

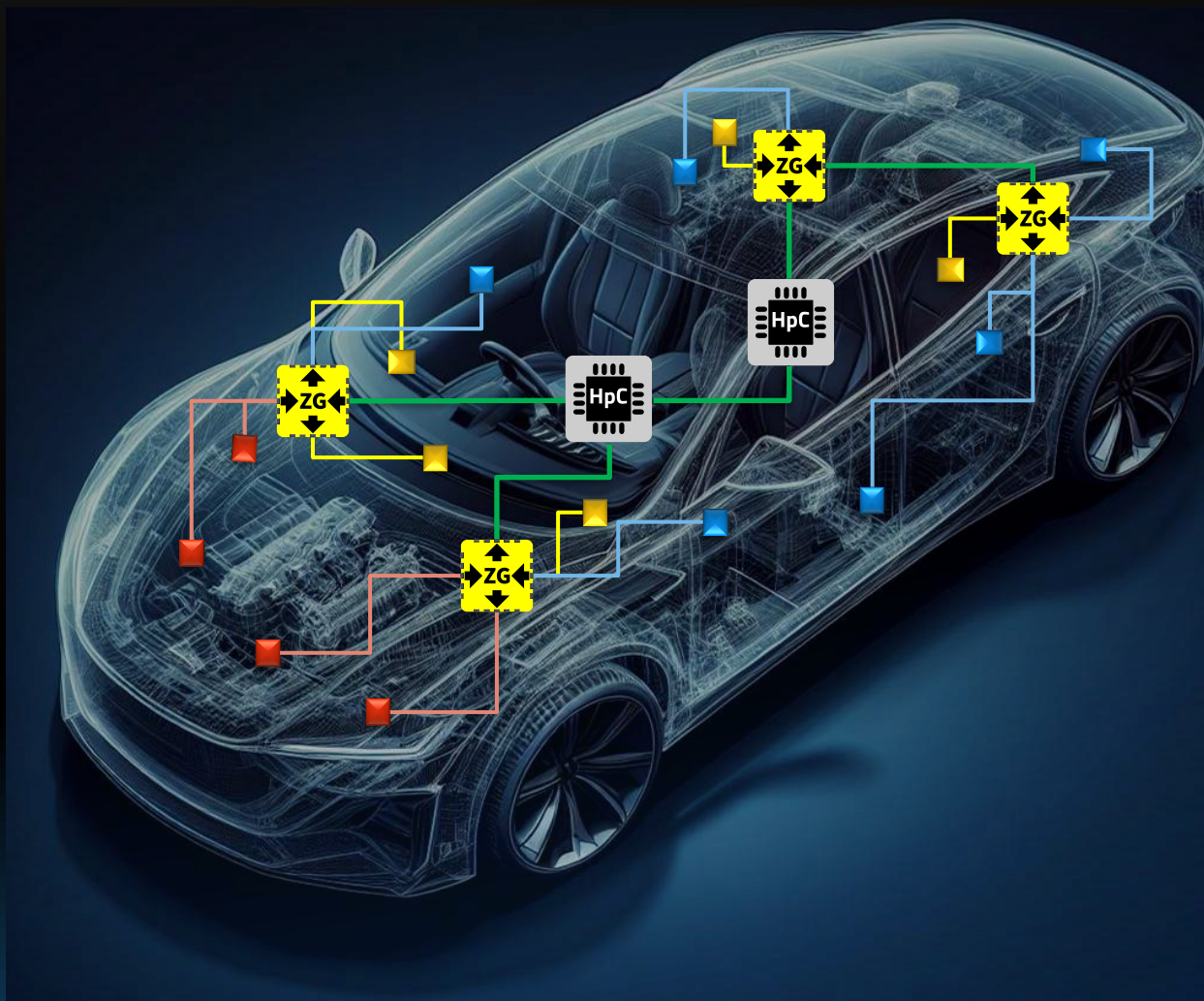


Entry Level Cockpit Application



APIX[®]3 High-End Pilar-to-Pilar Cockpit

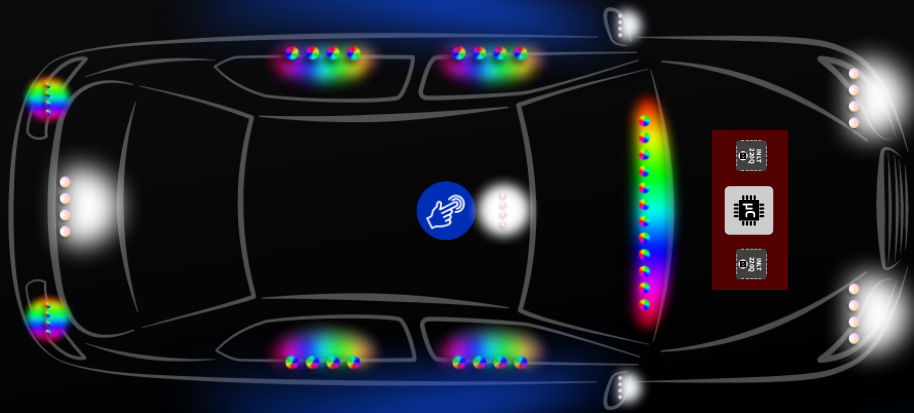




Migration of functionality from many domains to some **zonal gateways (ZG)** and **central processor (HpC)**

- Wide variety of data interfaces.
Video, CAN, LIN, ASA, Audio, SPI, MII, I2C, I2S, DP, HDMI, APIX3, ISELED, LVDS, PCIe, MIPI-DSI
- Variable bandwidths
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**.

Dynamic Ambient Lighting

Roof Lighting

Functional Lighting

Mood Lighting

External Lighting

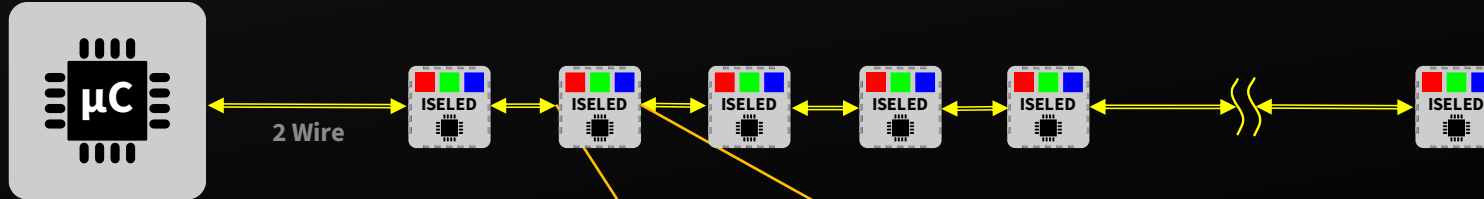
Welcome Lighting

Logo Lighting

Smart User Interface

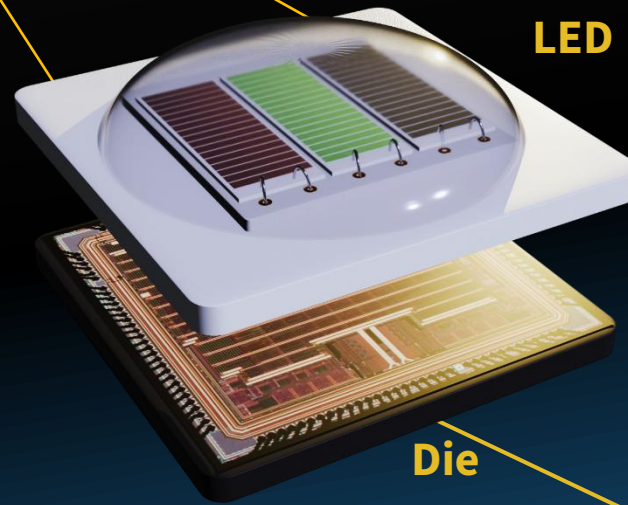
ISELED® the smart LED Technology

Light Effects

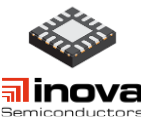
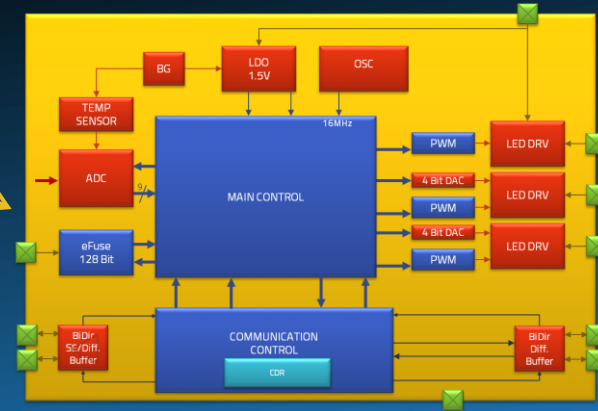


High Integration

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



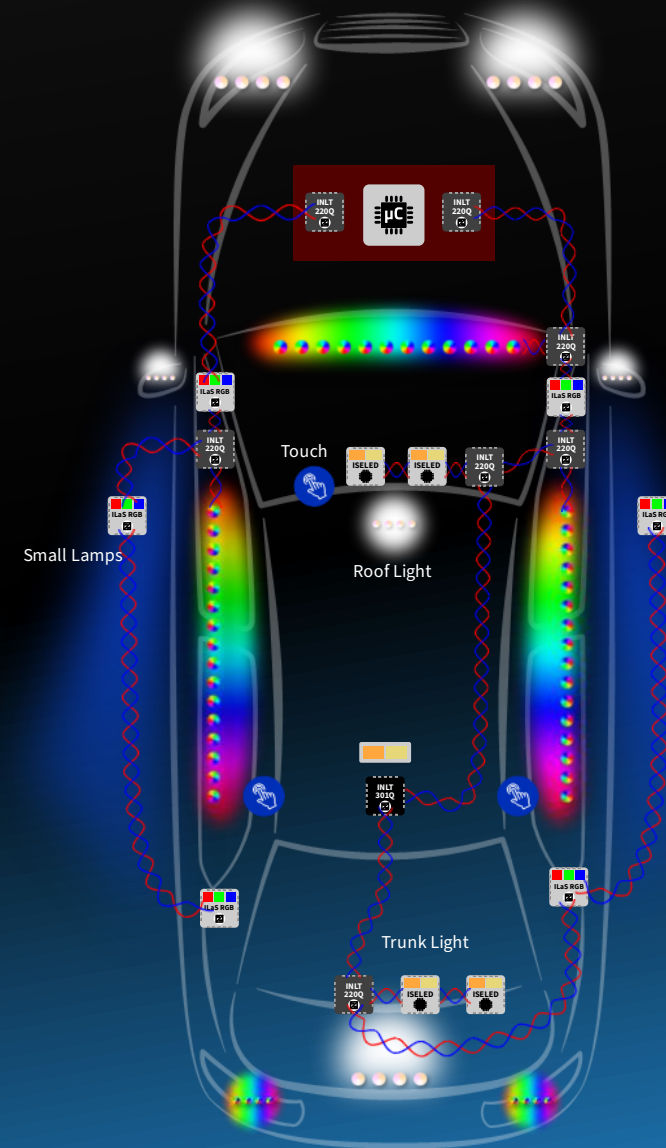
Daisy-Chaining of up to 4079 LEDs
 Calibration by LED manufacturer
 Bi-directional communication, Diagnostic



ISELED® Light & Sensor Network

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 scenarios
- 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 <https://iseled.com/>.



Supply Chain


Processing

Wafer Probing

Packaging

Final Test

Main Supplier

 GLOBALFOUNDRIES
Singapore:
FAB 5 Woodlands Park
FAB 7 Woodlands Park

 RoodMicrotec
Germany:
Nördlingen

 ASE
Taiwan: Chung-Li
Singapore

 ASE
Taiwan:
Chung-Li

 RoodMicrotec
Germany:
Nördlingen

Second Source

 GLOBALFOUNDRIES
Singapore:
FAB 3e Tampines Airport*

 RoodMicrotec
Germany:
Nördlingen

 GLOBALFOUNDRIES
Singapore:
FAB 3e Tampines Airport*

 ASE
Taiwan:
Kaohsiung *

 ASE
Taiwan:
Chung-Li

* Transfer and Qualification required

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



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 2020-2025

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 & 2024

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





Inova Semiconductors GmbH
Zielstattstraße 32
D-81379 München - Germany
Phone: +49-89-457475-60
Fax: +49-89-457475-88
info@inova-semiconductors.de
www.inova-semiconductors.de


General Manager: Robert Isele, Roland Neumann
Commercial register of the local courts
Registergericht München: HRB 125050
VAT identification number: DE 812 692 754

D-U-N-S: 34-130-9297

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