



Autoliv

Autoliv Electronics



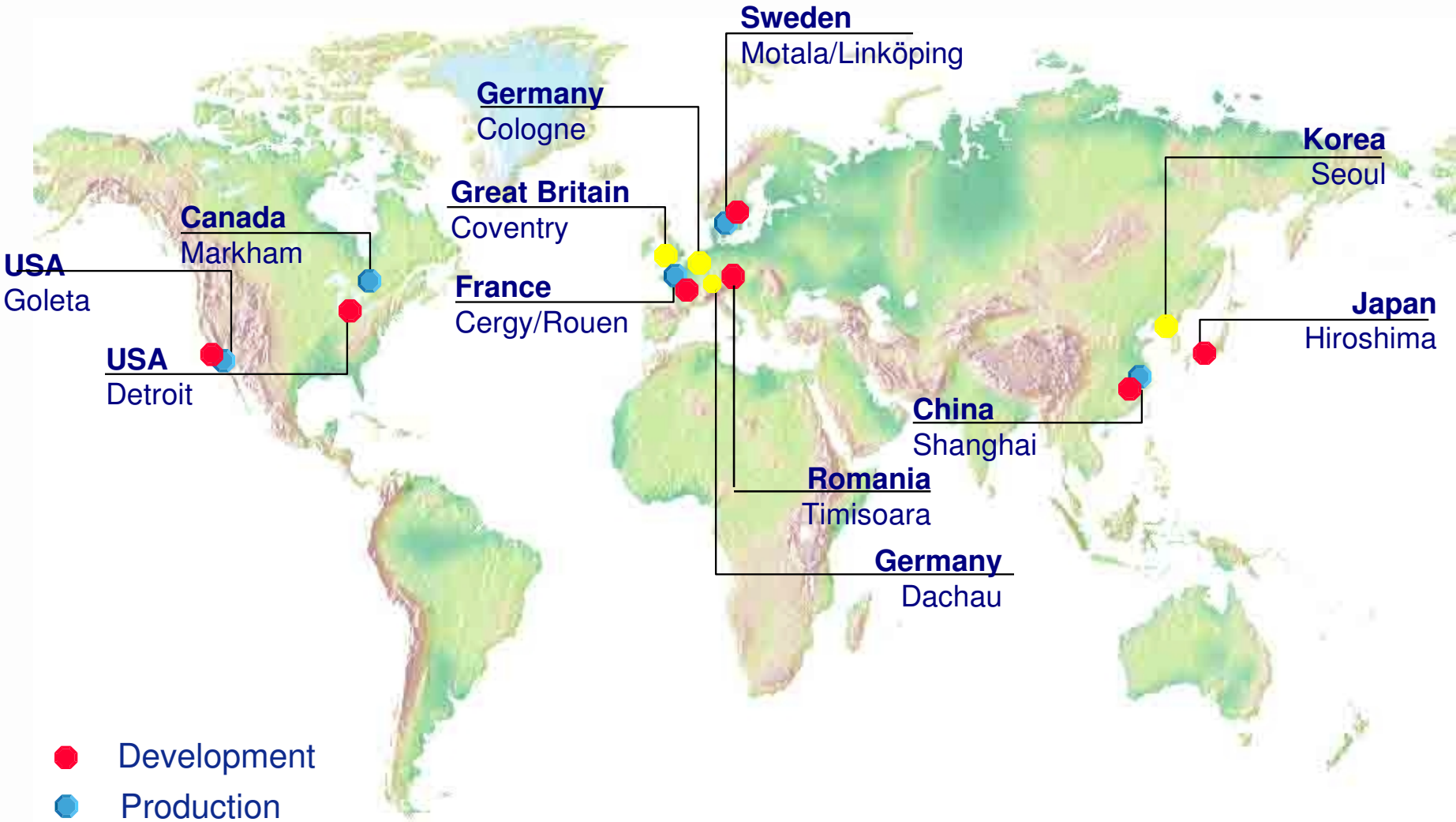
France

Autoliv Electronic France fait partie de l'organisation électronique du groupe Autoliv.

- Centre de R&D basé à Cergy.Parc SILIC : 160 employés.
- Activité : Conception et développement de système électronique dans le domaine de la sécurité automobile.
- Compétences :
 - Expertise en développement de calculateurs embarqués (logiciel, électronique)
 - Expertise en traitement du signal (Airbag)

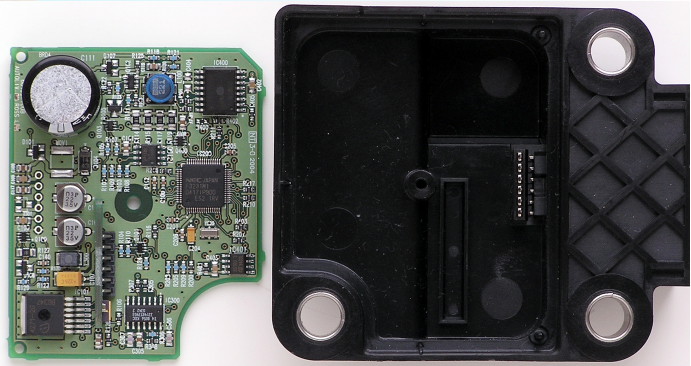
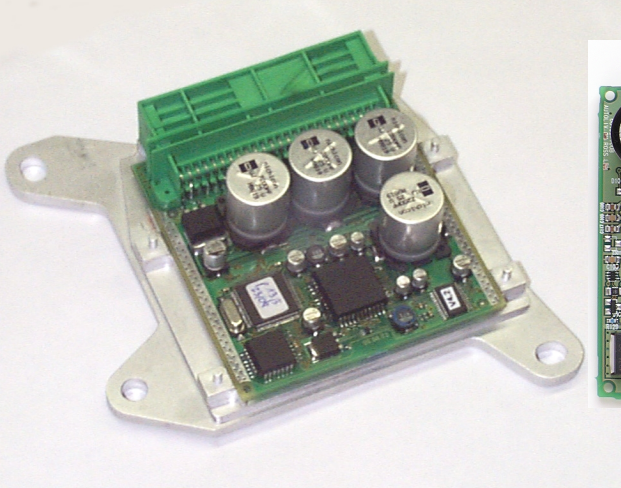
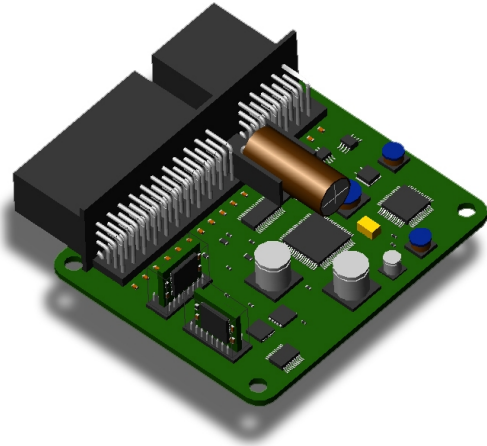
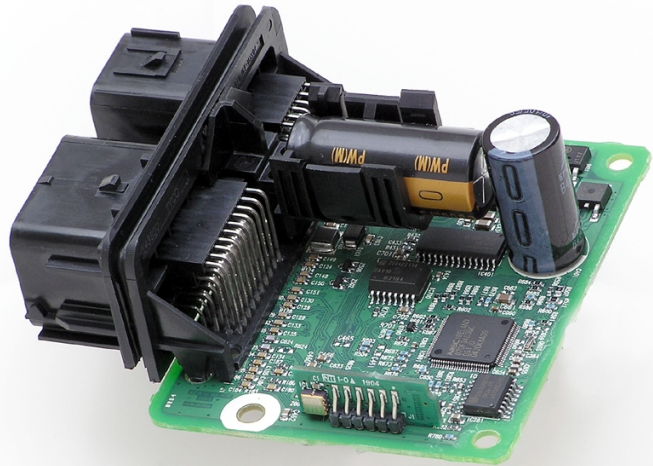


Autoliv Electronics Locations



- Development
- Production
- Customer support center

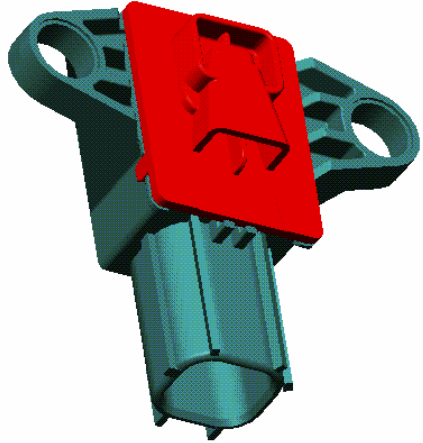
Product range Airbag controllers



Product Range Satellites

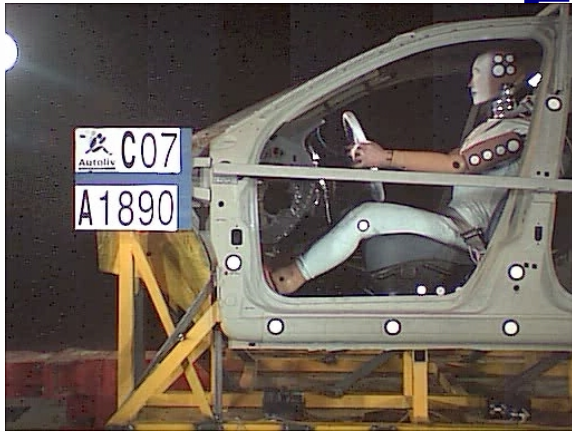


G-based sensors



Pressure sensors

Frontal crash firing

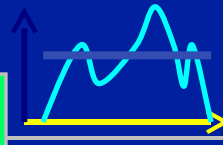


Measurement

Treatment / Decision

Power switching

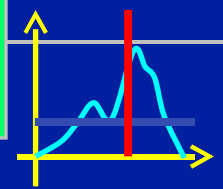
X
G-Sensors



Crash
algorithm

Fire

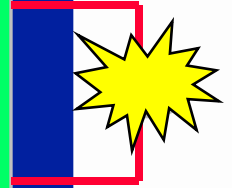
X
piezo sensor



Safing

Fire

Firing ASIC

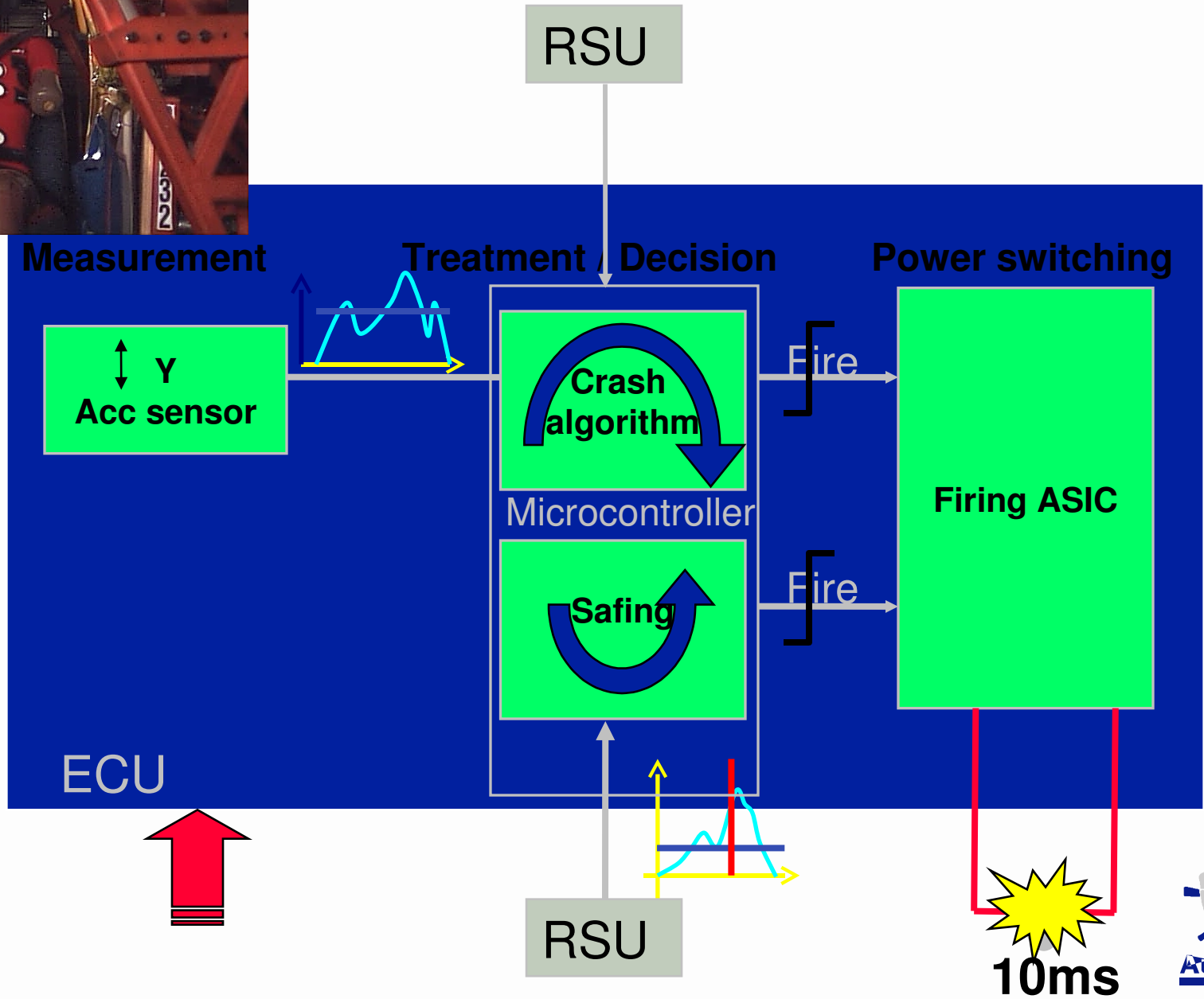


30ms

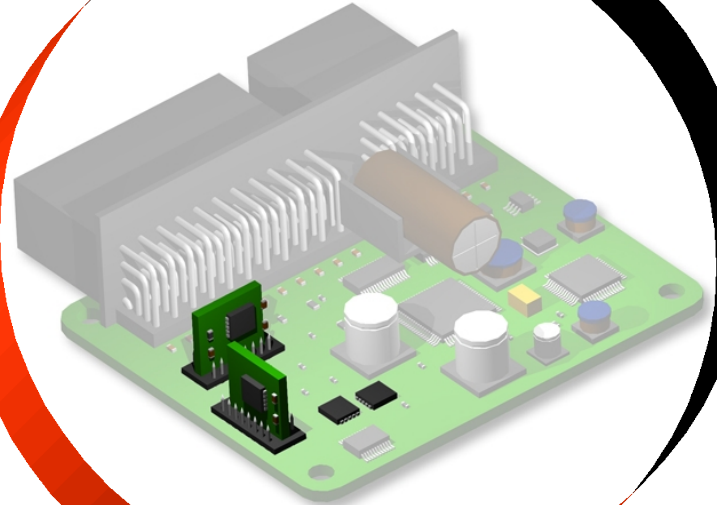
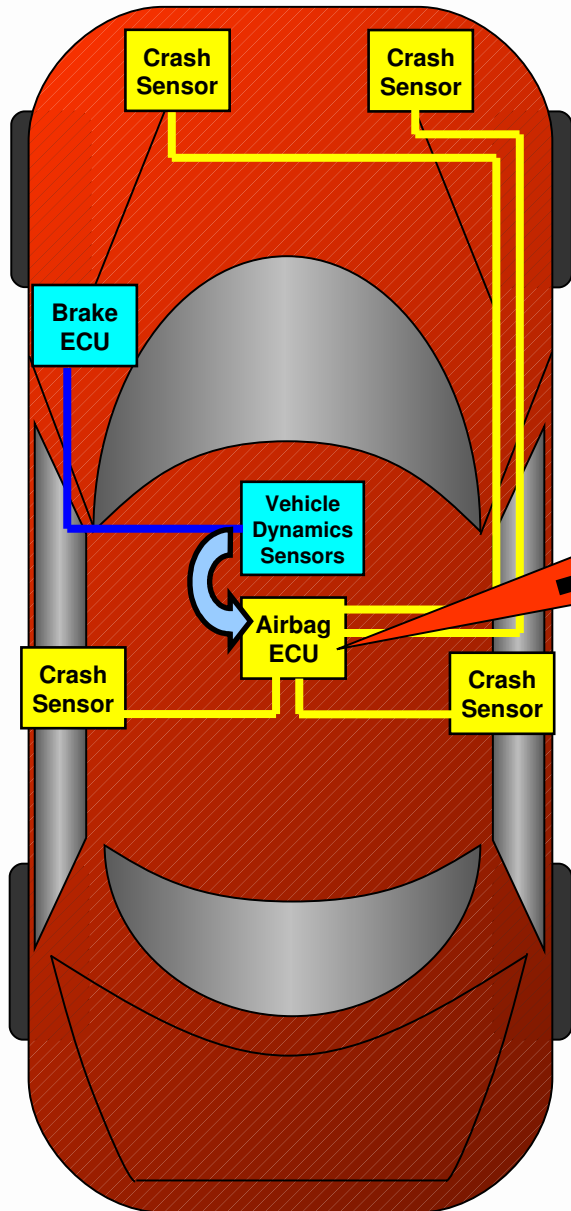
ECU



Side crash firing



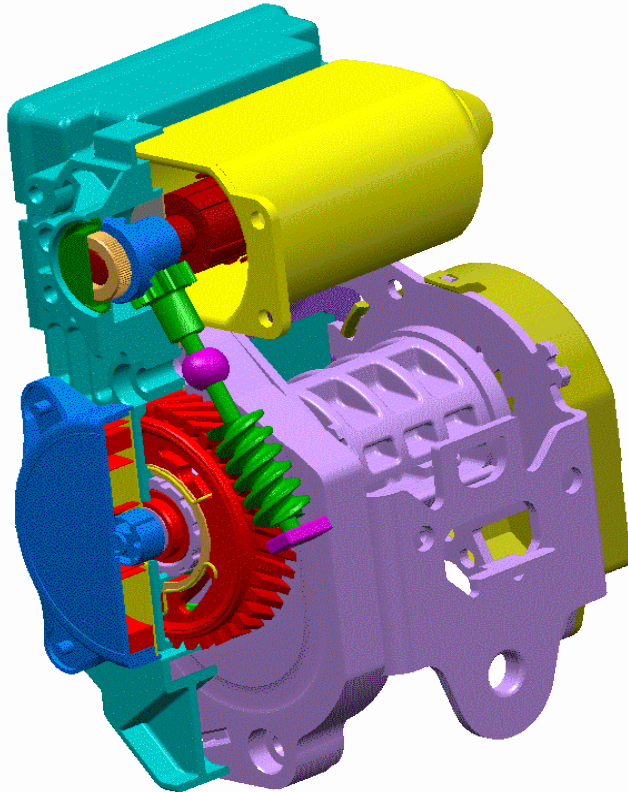
Vehicle Dynamic Sensors Integration



RC6-VDSi

- High performance sensors and signal processing for stability control systems
- Yaw Angular Rate + Pitch / Roll (optional)
- Y-axis low-g Accelerometer + X / Z (optional)
- Airbag ECU remains the same size
- Carryover RC6 chipset
- ~ \$20 vehicle savings

Retractor with reversible pretensioning



- **Comfort functions**

- belt parking
- belt slack elimination after buckle up

- **Soft belt slack reduction**

- under/over-steering,
- sport driving,
- rough road, off-road

- **Warning**

- over-speed
- avoidable obstacle
- lane keeping

- **Emergency**

- Pre-pretensioning

Integrated Safety Chart

Autoliv Technologies

Active Safety

Passive Safety

Research

Health

Keeping the car Fit
Steering, Brakes, Tires, TPI

FIR

24 GHz Radar

Telematics & Service

Checking Driver
Alcohol, Drowsiness

Enhancing Driver Awareness
NV, BSD, LCA, PA

Sensor Fusion

Post Crash Studies

Helping Driver
ACC +, QSA, Auto Parking

Response
Rescue, care

Alerting The Driver
LDW, LCA, Ped. Warning

Mayday
e-Call

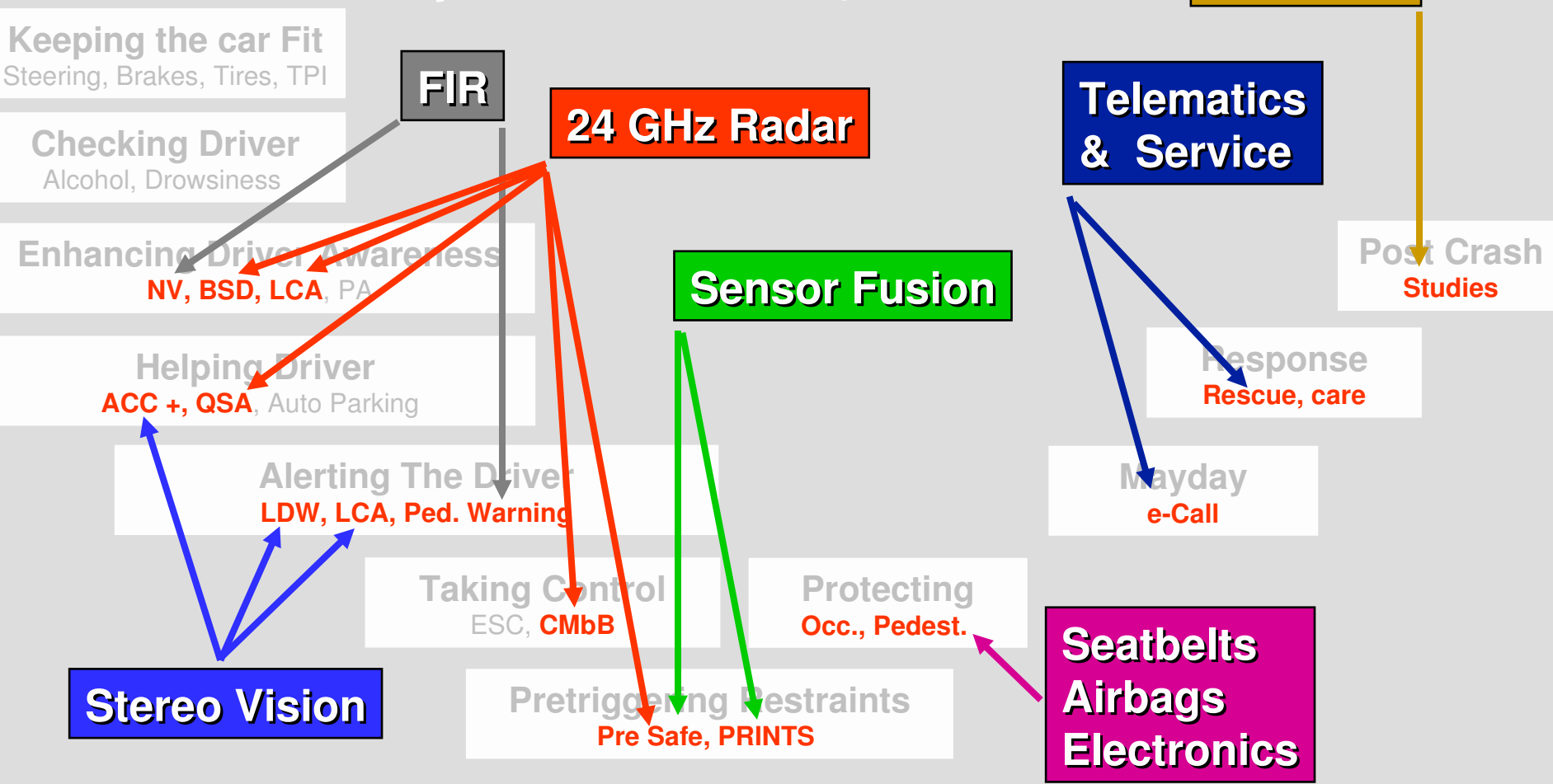
Taking Control
ESC, CMbB

Protecting
Occ., Pedest.

Stereo Vision

Pretriggering Restraints
Pre Safe, PRINTS

Seatbelts
Airbags
Electronics



Technologies Selection

Monocular & Stereo Vision Camera

- LDW, LK, HBA, SSR
- ACC, QA, Pre-safe, CMbB



RWD Looking 24 GHz Radar

- Lane Change Assist
- Blind Spot Detection



FWD Looking 24 GHz Radar

- PreSafe
- Queue Stop
- Crash Mitigation by Braking



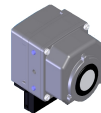
Vehicle Dynamics

- Pre-pretension
- Path prediction
- Enhanced Crash Sensing



Far Infrared Camera

- NV Display
- Pedestrian Warning



Night Vision System

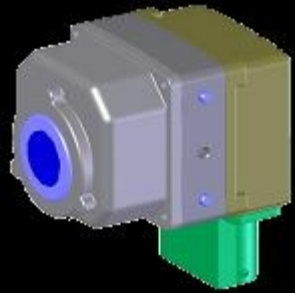
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BMW Night Vision

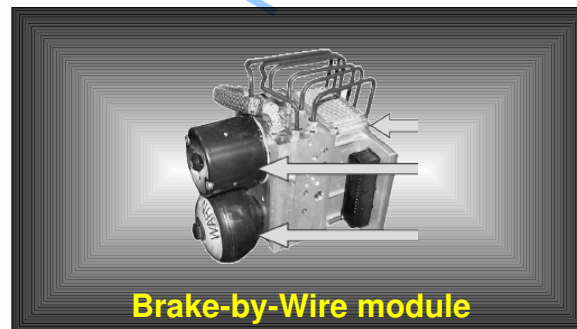
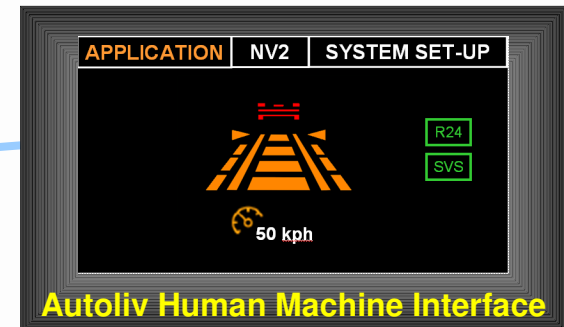
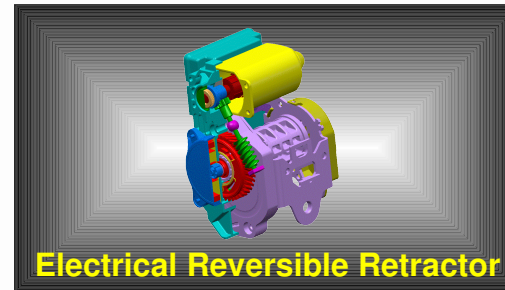
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ACTIVE SAFETY SYSTEMS





The Worldwide leader in Automotive Safety Systems