Welcome to the Automotive Electronic Systems Innovation Network (AESIN). Established in 2012, we are now in our fifth year as a group of companies with bases in the UK that are focused on the accelerated and advanced delivery of Electronic Systems into Automotive applications and infrastructure. Our aim is to drive innovation and attract companies to work in the UK Automotive Electronics industry.

We see ourselves as a strong mix of companies from all aspects of the Automotive, Electronics and Infrastructure sectors that act as a catalyst that enables rapid innovation in Automotive Electronics in a collaborative and non-competitive environment.

We are currently working on a number of exciting projects in the sphere of Connected Cars, Vehicle to Infrastructure Communications and Advanced Powertrain. We have started to scope new project areas in Automotive Security and Software Quality Assurance. We are also open minded to considering other projects in this rapidly growing area.

We are always looking for new ideas and new members to join us to help grow this industry sector in the UK. We look forward to working together in the near future.

"AESIN is the catalyst that enables rapid innovation in Automotive Electronic Systems in a collaborative and non-competitive environment"
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AESIN is an expert group focused on Automotive Electronic Systems, established in September 2012 in response to the explosion of Electronics in-car approaching 50% of vehicle cost. The UK is well positioned to leverage the market opportunity through existing skills mix, supply chain and by growth form investing OEMs.

Aims & Objectives

Facilitate world-beating Electronic Systems (ES) innovation through collaborative innovation, expert knowledge and best practice. Influence accelerated technology development and innovation across the supply chain.

1. Innovation
- Accelerating UK derived ES innovation into automotive markets
- AESIN recognition as a specialist expert group feeding Auto Council initiatives
- Share best practices in non-competitive environment
- Recognised by ElecTech, which estimates that businesses in electech generate about £100bn in revenues (2015)
- Aligned with the strategic objectives of Innovate UK, Transport Catapult and BEIS policy

2. Supply Chain
- Fortifying domestic supply chain; all layers: OEMs, Tier 1, Tier 2, etc.
- The go-to network for Electronic Systems technology

3. Markets
- Exploiting International markets
STRATEGIC THEMES

Workstreams

Automotive is a dynamic environment and the following themes are believed to be areas that would benefit UK vehicle manufacturers and would be areas that the UK electronics systems supply chain would be interested in supporting:

- Next Generation Vehicle Connectivity
- Low Carbon “Green” Powertrain Technology
- Next Generation Driver Information Systems
- Vehicle Information Networks

We are looking for companies ready to engage with new technologies and solutions. If interested please contact Rachel Palmer at rachel.palmer@techworks.org.uk

ADAS & Autonomous Vehicles

Chaired by Alan Walker, AVL Powertrain

This workstream will look at the technologies for increased autonomy in a Functional Safe Environment.

The ADAS & AV Workstream subgroups include:

- Sensing (and System Architecture)
- Machine Control
- Infrastructure
- Validation & Verification
- Standards & Safety

Automotive Security

Chaired by Peter Davies, Thales

This workstream will work in conjunction with the IoTSF activities addressing the specific challenges for security and resilience in Automotive environment.

The group will prioritise the Automotive Electronics security elements according to Industry demand and work closely with UK Automotive Council.
Chaired by Martin Green, Visteon

Led by Visteon the first project work on “Connected Corridor” will be used to trial an innovative connected car working solution that can be adopted on strategic highways and urban routes. This work is aligned with the UK Automotive Council “Intelligent Connected Vehicles” forum. AESIN members in this Workstream are also engaged in the UKCITE Project.

Chaired by Dr Will Drury, Ricardo

Led by Ricardo, the group will prioritise the Powertrain elements according to Industry demand and work closely with UK Automotive Council and APC.

Subgroups within this workstream include:

- Architecture and Systems – Lead by TATA TMTC
- Components – Lead by Ricardo
- Integration – Lead by AVID Technology
- Roadmapping – Supporting the APC work in updating Auto Council Power
- Electronics

Chaired by Michael Welsh, Altran

Methods and Approach to Manage Highly Integrated Embedded System.

This workstream will look at the methods and approach to manage highly integrated embedded systems in advanced automotive environment.
Collaborations

AESIN is proud of its long-term collaboration with key representatives of the Automotive Electronics Industry and is keen to work on these collaborations in the future.

Currently, AESIN has aligned its strategic objectives with those of Automotive Council, Innovate UK, Advanced Propulsion Centre, Transport Catapult and BEIS policy.
AESIN Annual Conference

Since 2012 the AESIN Conference has been establishing a reputation as the premier UK Automotive Electronics Conference. With over 200 delegates and capacity for over 20 exhibitors, the event is traditionally held at the popular National Motorcycle Museum next to Birmingham Airport. Along with headline keynotes from Industry and updates from Government, the conference will deliver parallel technical tracks focusing on the six key workstream areas covered by AESIN which include:

- ADAS & AV
- Automotive Electronics Security
- Connected Car
- More Electric Powertrain
- Research & Development
- Software

Exhibitor and Sponsor opportunities are available every year, please contact Rachel Palmer for more information if interested.

The popular Conference Networking Dinner takes place at the end of the formal conference talks helping maximise the potential for networking across Industry, Government and Academia in one place at one time.

ISO 26262 Practitioners Workshop

Held twice a year, this AESIN Workshop offers the exclusive opportunity to hear the latest from Industry experts and peers working within the ISO 26262 Functional Safety framework.

The Automotive Industry is going through a period of unprecedented change as electronic systems and electric powertrains enable Greener, Safer Connected Vehicles. Manufacturers facing the challenge on increasing system complexity are required to meet the stringent Functional Safety requirements defined in the standard ISO 26262.

Aimed mainly at Practitioners, the ISO 26262 Workshop provides the latest update on the Standard from leading experts, OEM and Tier1 through tools vendors covering key challenges including Security, Automated Vehicles and learnings from other sectors.
Members Plenary

The AESIN Plenary Sessions are held quarterly to provide updates from each Workstream through cross-collaborative discussions among members.

The Plenaries are for AESIN / TechWorks members and invited guests only. Non members interested in finding out more about AESIN ongoing activities and upcoming projects are warmly invited to get in touch before attending the Plenary.

Automotive Security Conference

Automotive Electronics Security is a major focus as we create ever increasing levels of connectivity and vehicle system complexity and cross industry participation is now creating real solutions to secure against cybercrime and hacking.

The Automotive Security Conference has been developed to deliver insights into the latest thinking and experiences from leading cross-industry players, considering topics such as skills requirements, digital trust, secure architecture, cryptographic keys / authentication and robustness – resilient application interfaces and remote updates / access / firmware OTA (over-the-air).
Automotive Electronic System Today

- **Electronics in-vehicle approaching 50% of vehicle cost**
- **£40 Billion**
- **Automotive sector annual export revenue**
- **£100bn**
- **ElecTech businesses generate around**
- **80% of innovation in-vehicle comes from electronics**
- **1 Million people working in Electronic Systems**
- **45,000 companies in Electronic Systems**

* Statistics are courtesy of ElecTech and Automotive Council UK.*
The People Behind the Company

Operated by

- Altran
- AVL
- Jaguar
- Land Rover
- KPMG
- Mentor
- Mentor (A Siemens Business)
- NISSAN
- Roke
- TechWorks
- Riccardo
- TechWorks
ACHIEVEMENTS

AESIN Summary

- Launched in 2012, in response to the explosion of Electronics in-car approaching 50% of vehicle cost.

- Recognised by ESCO (Electronics Systems Community), which estimates the Electronics Systems annual contribution to the economy at £80 Billion (5.4% of GDP).

- Recognised by the UK Automotive Council.

- Chaired by Alan Banks, Engineering Director EU, Visteon Eng. Services.

- Executive Steering Board Members include key stakeholders such as Highways England and Siemens Traffic Division.

- Core management board includes leading Vehicle Manufacturers such as Jaguar Land Rover, Lotus, Nissan, McLaren and representation from each tier in the supply chain.

- Aligned with the strategic objectives of Automotive Council, Innovate UK, Advanced Propulsion Centre, Transport Catapult, BEIS policy and more.
AUTOMOTIVE ELECTRONICS
CAPABILITY DIRECTORY

The AESIN exclusive UK Automotive Electronics Capability Directory 2017 will feature full coverage of the Automotive supply chain, including Tier 1, Tier 2, Consultancy Services, Researchers and more.

Find out how you can get involved
www.aesin.org.uk/auto-directory

* Conditions apply.
MEMBERSHIP BENEFITS

1. AESIN Workstream Activity

Addressing the industry need for a practical “hands-on” approach, we have developed a series of themed Workstreams each with an Industry leader and steering board ensuring a priority focus on delivering maximum value and impact.

Through this approach you can access opportunities for Scoping and defining collaboration opportunities; Access to Government funding through participation in co-funded collaborative projects (e.g. Connected Autonomous Vehicles, Low Carbon Vehicles - Advanced Propulsion).

Current themes can be found at page 4.

2. Roadmaps

AESIN is recognised by and has privileged access to the UK Automotive Council, and is actively engaged in shaping Automotive Electronics growth within the Industry. Our forums provide access to the Industry leaders who are shaping the next generation of Automotive Electronics Development. These include representations from OEM’s, Tier 1, Tier 2 (Chip), Universities, Consultants and Subject Matter Experts from across the industry and adjacent sectors.
3. Technology & Networking Events

Your staff would have FREE access to standard events (e.g. AESIN Security Conference) and would receive significant member discount for larger events (e.g. Annual AESIN Conference).

Discover full events details on our website: www.aesin.org.uk

4. Other Benefits

AESIN is operated through TechWorks which is the UK’s Deep Tech Hub with over 300 members across the UK. In addition to AESIN membership there is an opportunity to become engaged in our other connected communities including the IoT Security Foundation, NMI (Electronic Systems Design and Electronics Manufacturing) and several others which are operated in a simple model that allows you to access as required in future.

Find out more on TechWorks website: www.techworks.org.uk
JOIN THE AESIN COMMUNITY

How to join

We believe in keeping things simple at AESIN and you’ll be pleased to learn that there is a very simple process to follow to join us.

What are the fees?

Our aim is to provide access to the benefits of AESIN membership to all stakeholder organisations – from early-stage SME’s to large multi-nationals. We encourage a diverse and rich membership base covering every aspect of the industry and have designed a fee structure in relation to the size of the organisation reflecting value and ability to pay.

Organisations which have corporate headquarters in the UK or ROI benefit from a discount on standard fees.

Please visit the AESIN website to find out more.

To find out more about AESIN and how to join, please get in touch with the AESIN Director

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