

# Low-Volume Products from IAV

Development, production and supply on a one-stop shop basis

IAV has been manufacturing sophisticated electronic products in low and medium sized volumes for many years. It is here that clients benefit from a skill we excel at: IAV combines its proven development expertise for volume production with the proficiency required to manufacture electronic components in small batches. This results in shorter delivery times to market while also meeting OEM demands on low-volume production topics. In addition to hardware and software products, IAV's portfolio also covers electromechanical devices. Our product line-up ranges from operating and display units, on-board computers and special-purpose vehicle control units to high-voltage and complex overall vehicle systems.

Manufacturing and supplying small scale production solutions is a portfolio that perfectly complements IAV's engineering services. Our clients are increasingly looking for partners, who are experienced in bringing the developed electronic component into small volume production on a one-stop shop basis. IAV's motivation is to extend its value added chain for our clients by providing a professional approach to the client's task of adapting standard OEM requirements and procedures to low volume manufacturing processes. At IAV the core of each production topic remains the development activity, which helps when dealing with the growing demands placed on the product such as quality, speed and innovation. IAV is focussing on low to medium scale volumes ranging from several hundred to several thousand units a year. This business segment is extremely dynamic and often demands quick response times which IAV satisfies by employing methods to guarantee flexibility. IAV works with certified suppliers and electronic manufacturing service providers (EMS suppliers), who are selected and audited based on product, regulatory and industry-specific requirements, such as ISO/TS 16949. During and after the product development process, IAV coordinates and monitors the entire process chain to ensure that products are reliably available over the entire product lifecycle. Cleverly devised logistic concepts, carefully selected production sites and materials as well as short supply channels contribute to ensuring cost-effective and sustainable practices in everything we do.

#### IAV's benefits for the client

- *Internal networking for development efficiency*
- *Integrated strategy across the product life cycle*
- *High level of flexibility and fast reaction times*
- *Manufacturing by suppliers selected specifically for the component involved*
- *Intelligent supply chain management*
- *Sustainable approach*

#### IAV products can be used in

- *Special-purpose vehicles (such as police and emergency vehicles)*
- *Agricultural machinery and commercial vehicles*
- *Construction machinery*
- *Power shovels and fork lifts*
- *Sports and racing cars*
- *Luxury vehicles etc.*



# High Quality in Small Volumes



Operating and display units



Powertrain control units



Special-purpose vehicle and gateway control units

## Early Integration into the Product Creation Process

As early as the project-specific development stage, IAV takes care of

- manufacturing prototypes with production-level equipment,
- compiling test specifications and
- validating and testing as basis for applying the results as soon and as efficiently as possible to start low-volume production.

## Interdisciplinary Cooperation

IAV's broad range of experience provides the platform for development of complex electronic components all the way through to production readiness on time and in the quality demanded. Specialized departments and experts dedicated to technologies such as

- displays and controls
  - telematics
  - driver assistance
  - propulsion systems and powertrains
  - steering and chassis
  - air-conditioning
  - body and lighting electronics
  - power electronics and production activities
- and for manufacturing topics such as
- production technology
  - supply chain management
  - DFM (design for manufacturing)
  - DFT (design for testability)

all work closely together at IAV across the product life cycle in providing the requisite expertise.

## IAV's Modular Approach for Efficiency and Quality

IAV's modular hardware and software systems provide the cost-effective basis for rapid engineering and production solutions that meet the client's demands. IAV's development process, for example, covers the integration of client-defined modular elements (e.g. software modules or standard ECU cases), and is all part of our day-to-day project business.

## IAV's Service to the Client

- Concept definition – product, project, process, logistics
- All-encompassing development expertise
- Customer specific solutions ready for manufacturing
- SOP support – handling of external influences
- Culture of ongoing product optimization
- Client support
- Product monitoring
- After-sales

### Product management

Product initiation

Product development

Production

Operation

### Quality management

Product life cycle