



technology for innovation

## INTEGRATION SERVICES

TURNING UNITS  
AND SENSORS INTO  
TURNKEY SYSTEMS



**Core Services for Sensor/  
Platform Integration**  
**Mechanical and Electrical design**  
**Construction**  
**Sensor Networking & Functional  
Integration**  
**Control & BITE**  
**System Validation**  
**System Qualification**

**Based on the use of proprietary  
architectures and solutions**  
**In partnership with key vehicle  
manufacturers (VW, Daimler)**  
**Fulfilling EU/Germany safety  
regulations and TÜV-certification  
procedures**  
**Fulfilling law enforcement  
and military standards**

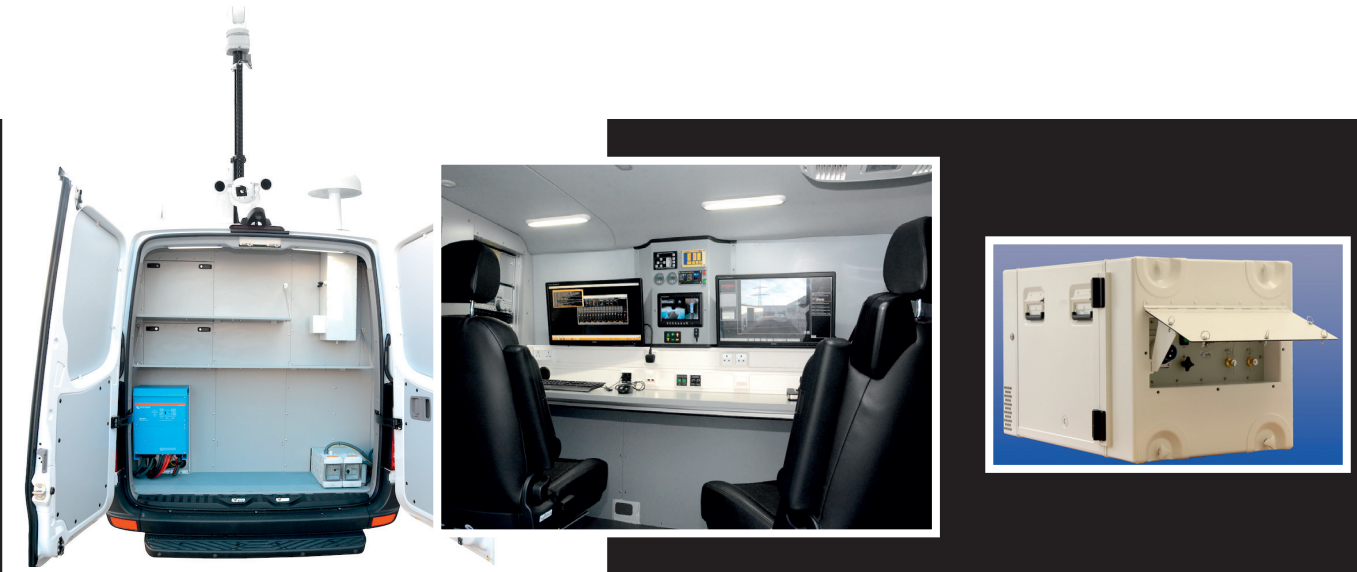
Elettronica has the design authority for system integration of Ground, Naval and Air Units. On this basis Elettronica provides turnkey solutions according to customer wishes for operational capabilities. The design covers mechanical, electrical and electromagnetic aspects as well as sensor design if applicable.

Until now Elettronica has delivered more than 150 vehicles of more than 15 types to its world-wide customers. All solutions are validated in the field.

Severe constraints are successfully managed by Elettronica through the use of innovative design, tools and materials. From simple electronic enclosures through antenna chassis up to ISO containers, Elettronica has provided its Customers with unique composite solutions that are already in operation.

# MUROS

## INTEGRATION SERVICES



Electrical and Mechanical Design  
 Software aided design  
 Autocad Inventor, CATIA V5, E-PLAN, HARNESS,  
 HFSS, CST, SAVANT  
 Partner of VW and Mercedes  
 Structural Simulation  
 Finite Element Analysis  
 Static and dynamic (crash analysis)  
 Thermal Simulation

Sensor Networking and Functional Integration  
 Open architecture for interfaces  
 Data Storage  
 Integration with Mission Planning  
 and Fleet Management

Framework Software  
 Providing single User Interface to the Operator  
 Data collection, management and storage  
 Control of legacy devices and sensors  
 Integration of sensor specific User Interfaces  
 Centralized status monitoring  
 BIT on request or continuous BIT functions  
 Enables full remote operation via secure data link

The multi-disciplinary work – required by complex integration tasks – is carried out by Elettronica through an agile design & development process to which mechanical design, structural, thermodynamic simulation, electrical design and electro-magnetic simulation synergically contribute.

The available library of building blocks and proven solutions drastically shorten the time-to-production, as well as the partnership agreements with the manufacturers of the platform and favorite suppliers.

Simulation and testing of systems, units or vehicles in operational conditions allow proper design of ancillary functions such as HVAC, liquid-cooling, air ventilation, environmental conditions controller. Similarly, EMI/EMC aspects are carefully addressed based on EU/MIL standards, as well as security aspects related to signal leakage.

ELETTRONICA open architecture for sensor and actuator networking allow the required real-time interactions among the integrated sensors and the platform. The physical layer varies and include CANBUS, point-to-point cable connections, ETHERNET, WIRELESS, as well as different protocols to exchange this data.