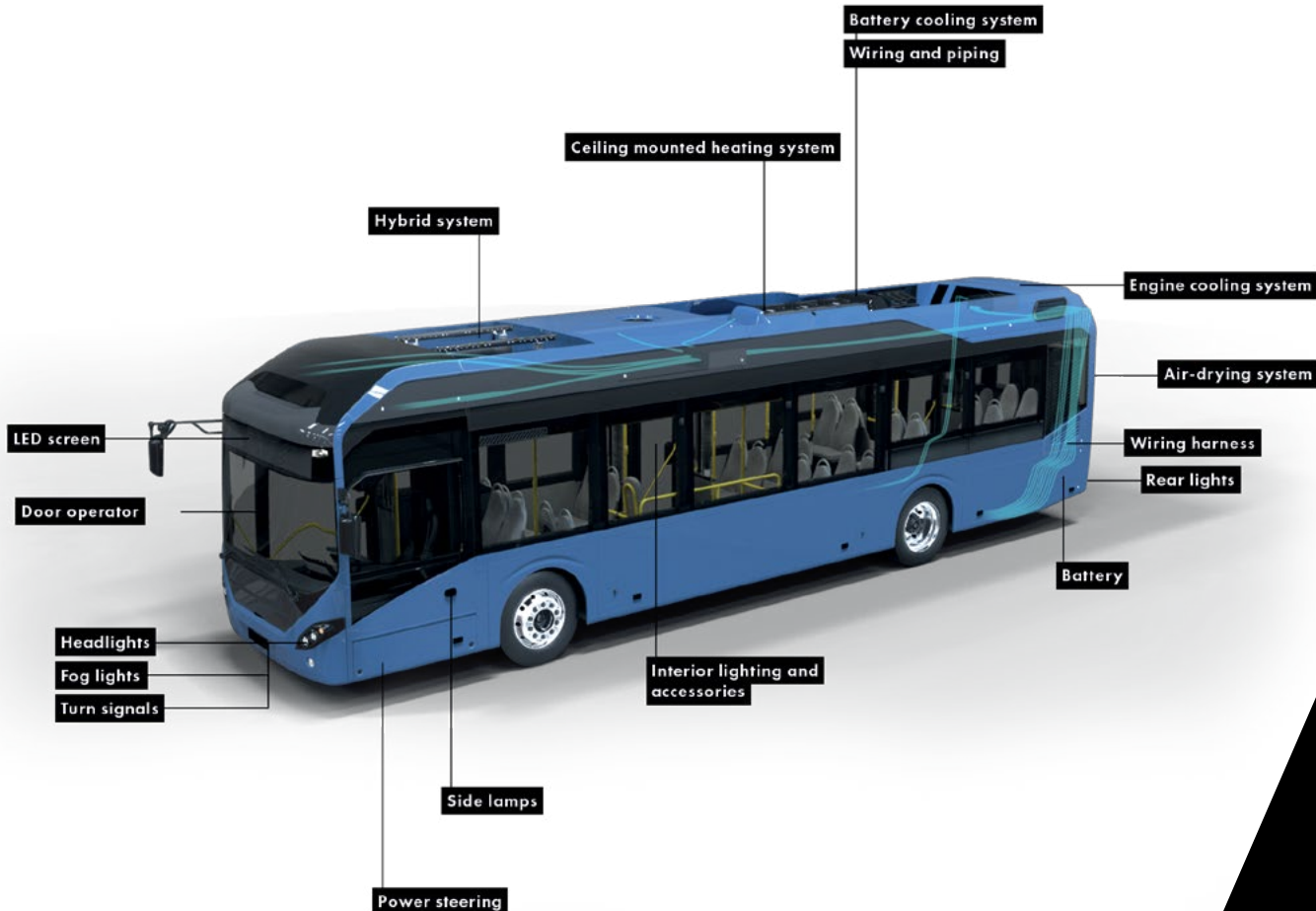


# ELECTRICAL ENGINEERING

OUR EXPERTISE ENABLES US TO OPTIMIZE EXISTING ELECTRICAL SYSTEMS AND DESIGN NEW ONES. ENTRUST YOUR PROJECTS TO OUR TEAM AND TAKE ADVANTAGE OF A SERVICE TAILORED TO YOUR NEEDS.

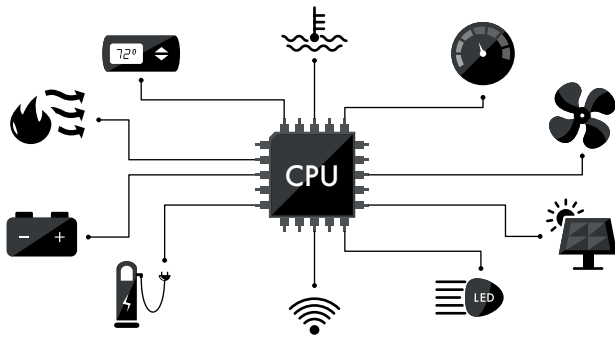
- Activity planning for electrical system integration projects:
  - Client needs analysis to ensure required system specifications and performance are met
  - Identification and analysis of applicable standards
- Design and creation of electrical diagrams
- Search and selection of electrical components
- Design procedures for finished product and subcomponent electrical testing
- Reduction of power consumption
- Industrialization of prototypes for mass production
- Development and optimization of electric harness systems
- Failure cause analysis
- Assistance with UL and CSA certifications
- Assistance with EMI/EMC certification prequalifications



# ELECTRONIC ENGINEERING

OUR EXPERTS PROVIDE FULL OR PARTIAL SUPPORT OF YOUR ELECTRONIC PRODUCT DEVELOPMENT PROJECTS.

- Document specifications
- Technical feasibility analysis
- Creation of functional diagrams
- Risk analysis
- Architecture hardware selection
- Search and selection of components
- Cost analysis
- Perforated board concept validation
- Design of printed circuits
  - Creation of electrical diagrams
  - Layout of components on the PCB
  - Prototype assembly
  - Embedded systems development (Atmel, Microchip Technology, TI, Renesas Electronics, STMicroelectronics)
  - Validation test management



Many other related services:

- Computational fluid dynamics (CFD) and heat dissipation simulation
- Electronics consultation (interference, power supply, control)
- Production start-up support

# AUTOMATION

CREAFORM ENGINEERING PROVIDES A FULL RANGE OF SERVICES TO HELP YOU DEVELOP AND IMPLEMENT ROBOTIC INTEGRATION AND INDUSTRIAL PROCESS AUTOMATION PROJECTS.

- PLC programming
- Programming and integration of industrial robots
- Design of clear and simple user interfaces (HMI)
- Machine risk and safety analysis
- Industrial electronics design
- Integration of digital vision systems
- Automated equipment commissioning and optimization
- Integration of Creaform optical metrology equipment using robotics

