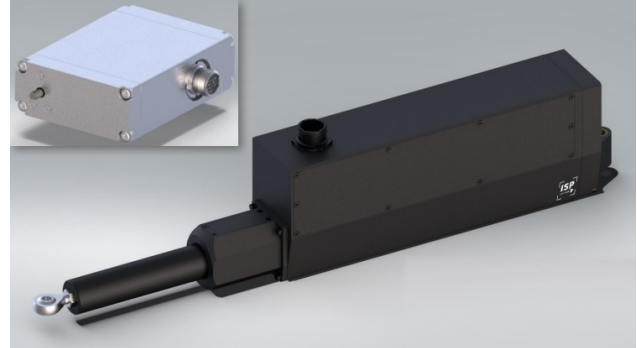


SEVERAL APPLICATIONS

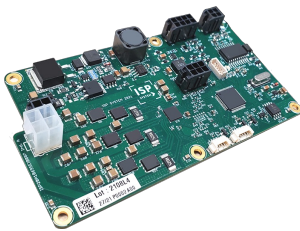
## CANopen actuators

The actuators from ISP System (France) are designed for integration of mechanic and electronic hardware. They are suitable for aeronautics, defense, railways, medical, and spatial devices and communicate via CiA 301 CANopen application layer and general communication profile.

Aeronautic, defense, and UAV (unmanned aerial vehicle) applications require actuators that get command from vehicle supervisor and give feedback in a real time mode. According to the company, the most important features of actuators are energy efficiency and power density for the integration of all components. The actuators should be able to provide its rated power without the need for any additional cooling features like heat sinks or fans which would increase the overall dimensions and weight strongly. Equally important are connections for various sensors, energy converter, as well as a network interface.



(Source: ISP System)

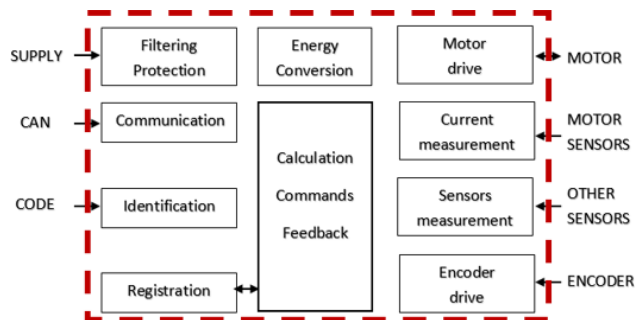


ISP system designs and manufactures embedded actuators for aeronautics, defense, railways, medical, and spatial devices mainly for European markets; This is an example of a controller board (Source: ISP System)

The actuators from the company communicate via CANopen protocol which ensures high reliability and robustness as well as compatibility with a large number of devices with which is communicated, explained the company. The software through the CANopen communication, manage the displacement and parameters of the actuators. Identification, calibration, maintenance, debugging, bootloader are other functionalities helpful to manage actuator services.

The company serves several applications such as openings assistance, rudders management, rearmament, and automatic pilot. Defense market is booming with

applications for vehicle doors openings electrification, the company said. Programs in aeronautic for doors management are also at a stage of proof of concept. UAV market requires actuators for remote control.



Electronic architecture of a typical actuator (Source: ISP System)

[CW](#)