

PROJECT

## AMPS

### Aircraft Modular Power Converter Solutions

**Funding:** European (Horizon 2020)

**Duration:** Mar 2018 - Aug 2019

**Status:** Complete

**Total project cost:** €712,524

**EU contribution:** €498,767



**Call for proposal:** H2020-CS2-CFP06-2017-01

[CORDIS RCN : 217513](#)

#### Objectives:

The aim of this project is to demonstrate the use of integrated hybrid power modules in the design of aircraft power converters. The project aims to show that using a standardised power module for various converter topologies will give numerous benefits, including higher power density, lower cost and higher reliability.

#### Methodology:

This first part of the project entails the design and manufacture of a Power Module which will form the building block for two different power converter types which can be used in commercial aircraft power distribution applications.

The second part of the project entails the demonstration of the use of the power module, which will be developed in the first part of the project, in power converter applications by designing and building two different converter demonstrators - one an Active converter and the other a Matrix converter.

The project will also look at the trade-offs of different design choices for the power module, in this particular application.

#### Parent Programmes:

[H2020-EU.3.4. - Horizon 2020: Smart, Green and Integrated Transport](#)

**Institute type:** Public institution

**Institute name:** European Commission

**Funding type:** Public (EU)

**Other programmes:** JTI-CS2-2017-CFP06-SYS-02-31 Innovative pump architecture for cooling electrical machine

#### Lead Organisation:

**Microsemi Ireland Trading**

**Address:**

INDUSTRIAL ESTATE GORT ROAD ENNIS CO. CLARE  
ENNIS  
Ireland

**EU Contribution:** €498,767

#### Technologies:

Aircraft propulsion  
Aviation hybrid electric powertrain

**Development phase:** Demonstration/prototyping/Pilot Production

**STRIA Roadmaps:** Transport electrification, Vehicle design and manufacturing

**Transport mode:** Air transport

**Transport sectors:** Passenger transport, Freight transport

**Transport policies:** Other specified

**Geo-spatial type:** Other