



# Airborne Electronic Countermeasures Low Noise Airborne Power Solution



Low EMI



Small Size,  
Low Profile



Low  
Weight

## The Customer's Challenge

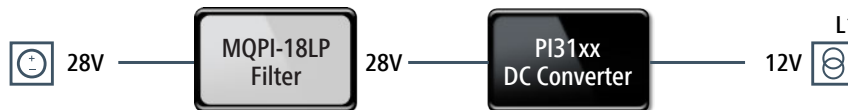
This aircraft-mounted passive detection system needed to sense radio signals over a wide bandwidth. The design of the detection system power supply had to meet very low levels of conducted and radiated EMI to enable the system to detect the low level signals generated outside the aircraft. Intended for use on a variety of aircraft and helicopters the supply needed to be physically small, low weight, yet very rugged.



## The Solution

The power supply was based around the PI31xx Isolated DC-DC Converter that accommodates a wide 16 – 50V input, and provides a regulated, isolated output at up to 50W, with minimal external components required. EMI filtering was provided by an active common mode stage, the QuietPower® EMI filter module MQPI, which at 12.4 x 25 x 4.5 mm had a small footprint and was very light weight.

[Link to Whiteboard »](#)



## The Results

Physically lightweight and very small (just 22 x 16.5 x 6.7 mm), the DC-DC converter fulfilled the low profile requirement. Indeed, the physical dimensions and weight of the system meant that it was also suitable for use on unmanned autonomous vehicles (UAVs). The total solution complied with MIL-STD-461F EMI requirements.

### Product Family Key Specifications

#### PI31xx Isolated DC-DC Converter Modules

<b>Input Voltages</b>	48V (36 – 75V) Comms 28V (16 – 50V) M-Grade 24V (18 – 36V) Industrial
<b>Output Voltages</b>	3.3V, 5V, 12V, 15V, 18V
<b>Output Power</b>	50W / 60W (dependent on model)
<b>Efficiency</b>	Up to 87%
<b>Dimensions</b>	22 x 16.5 x 6.7 mm