

# OcPoC Zynq Mini

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## Product Overview



OcPoC Zynq Mini is one of the most advanced, powerful, and versatile flight controllers on the market. It is designed with the Xilinx Zynq Z-7010 FPGA+ARM SoC which includes the ARM A9 processor and an Artix-7 FPGA. The FPGA+ARM SoC design allows for I/O flexibility and expansion as well as increased processing

power. It is also equipped with two internal 9-DOF IMUs, one internal barometer, and programmable external I/Os. The I/O flexibility and processing power has allowed the OcPoC Zynq Mini the capability of triple redundant flight sensors with no change to the interface board. All these fit within a small footprint that is about the size of a credit card.

With current support for PX4, Ardupilot, and ROS, the OcPoC Zynq Mini is a great solution for small autonomous vehicle developers and advanced drone manufacturers. It has driven many revolutionary drone applications, such as agriculture dust spray, long haul transportation, and more.

**AI-Capable** FPGA and dual-core ARM processors in OcPoC Zynq Mini allow for real-time signal processing and advanced algorithm computing, enabling exciting new possibilities for artificial intelligence, deep learning, and truly autonomous and intelligent UAVs.

**Flexible I/O Support** With more than 30 programmable I/Os that support most standard interfaces, OcPoC Zynq Mini is incredibly flexible and able to support a wide variety of applications.

**Sensor Triple-Redundancy** OcPoC Zynq Mini is capable of industrial-grade redundancy, ensuring the functions of the critical components such as GPS, IMU, and Magnetometer.

In addition, Aerotenna provides the necessary tools for developers to develop all levels of the flight controller including tools for FPGA and kernel development. All these tools make it easy to develop applications quickly.

## Specifications

<b>Xilinx Zynq Z-7010 Processor</b>	
<ul style="list-style-type: none"><li>• 667 MHz Dual-Core ARM A9</li></ul>	
<ul style="list-style-type: none"><li>• Artix®-7 FPGA with 28K Logic Cells</li></ul>	
<ul style="list-style-type: none"><li>• RAM: 512MB DDR3</li></ul>	
<ul style="list-style-type: none"><li>• Flash: 128Mb</li></ul>	
<ul style="list-style-type: none"><li>• Micro-SD Card: 16GB</li></ul>	
<b>Sensors</b>	
IMU	MPU9250 (x2)
Barometer	MS5611
<b>I/O</b>	
<ul style="list-style-type: none"><li>• 16 programmable tri-pin GPIO I/Os</li></ul>	
<ul style="list-style-type: none"><li>• 9 programmable I/Os, and 1 CAN bus, with JST-GH connectors</li></ul>	
<ul style="list-style-type: none"><li>• Supported Interfaces: I2C, USB-OTG, USB-UART, SPI, CSI (for camera), GSI, and CAN</li></ul>	
<ul style="list-style-type: none"><li>• Micro-SD card slot for Linux booting and data logging</li></ul>	
<b>General</b>	
Power Consumption	3W (typical)
Power Input	4.5V - 5.5V
Size	9.2 x 6.4 x 2.1 cm (3.6 x 2.5 x 0.8 in)