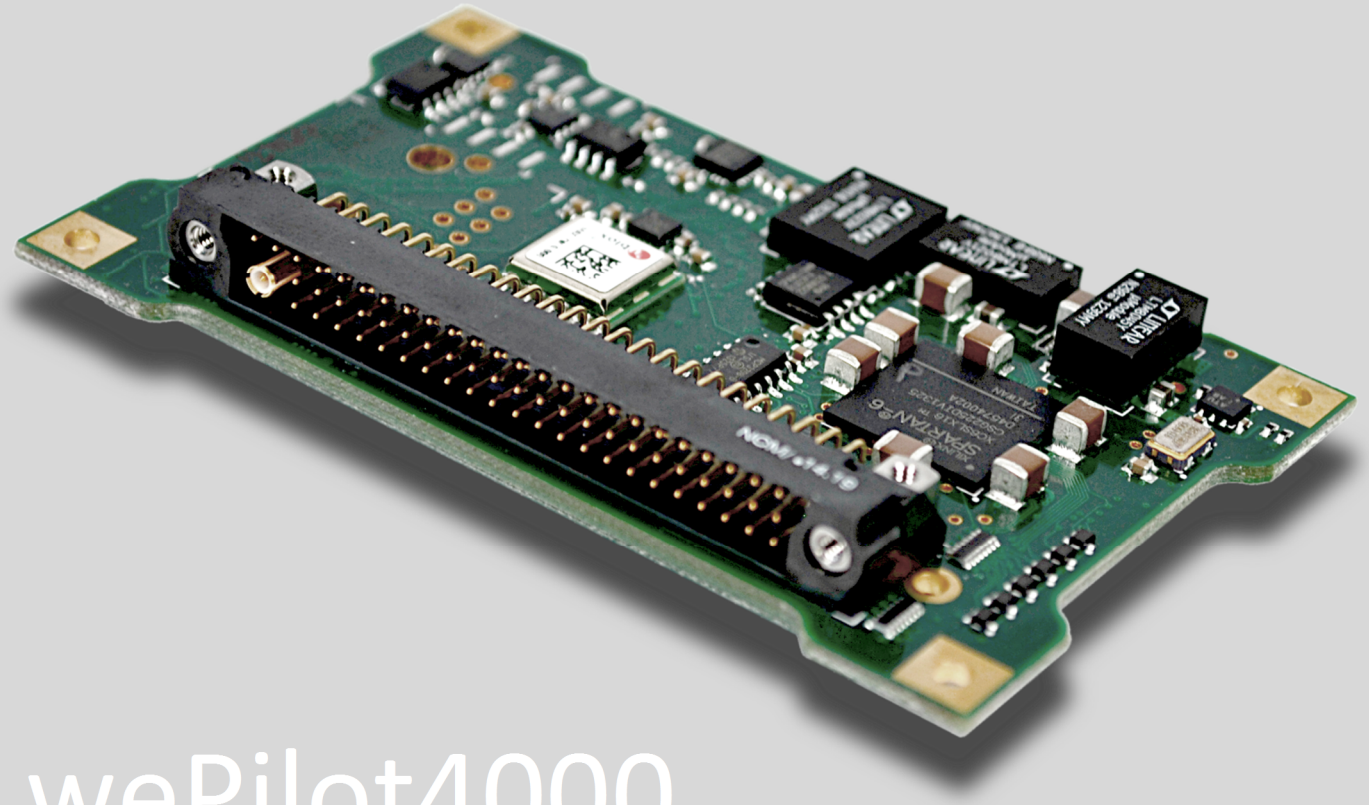


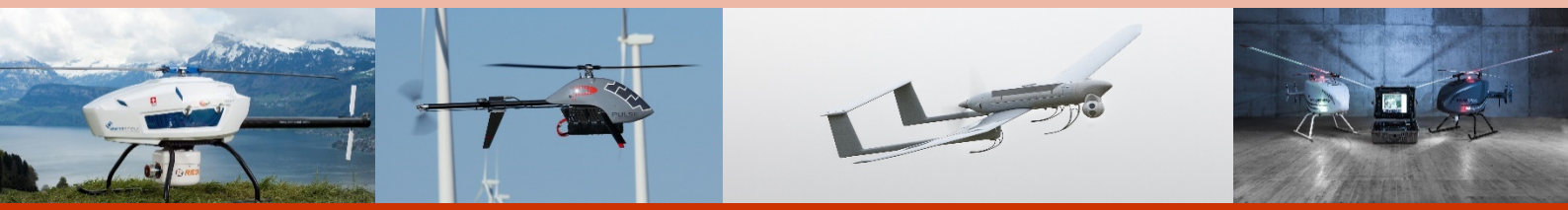
wePilot4000

The wePilot4000 is a flight control system for small rotary and fixed wing unmanned aircraft systems. It consists of a single PCB which integrates an embedded computer system, a GPS receiver, accelerometers and rate gyros for all three axes, an absolute pressure sensor and a magnetometer.

The wePilot4000 combines integrated GPS/inertial navigation with robust controller design methodologies to provide attitude stabilization, motor speed, airspeed control and accurate trajectory tracking even under high wind conditions.

Various interfaces (Ethernet, CAN, RS-232/485, digital I/O, analog inputs, S-Bus inputs, PWM outputs) allow to read external sensors and to control custom payload equipment. A datalink may be added to interface with the weGCS ground control station. Due to its small form factor and low power consumption the wePilot4000 is suitable for light weight aircraft.

weControl



Specification

CPU

PXA255, 400MHz, 64MB RAM, 32MB ROM

FPGA Spartan-6

Sensors

3 gyroscopes ..... ±250°/s

3 accelerometers ..... ±8g

3-axis magnetometer 1

GPS/GLO receiver 1

Absolute pressure sensor 1034hPa

Interfaces

RS-232 5

RS-232 or RS-485 1

RS-232 or TTL 2

CAN bus interface 1

Ethernet interface 1

PWM outputs 8

Resolution 100ns

S-Bus receiver interfaces 2

Digital inputs/outputs 12

Analog inputs (0-5) 8

Frequency counters (RPM sensor) 2

Environment

Operating temperature ..... -40 to +85°C

Electrical

Input voltage 7-18VDC

Supply current (@12VDC) 200mA

Physical

Size (L x W x H) ..... 84 x 53 x 20mm

Weight 60g

Block diagram