

FOR IMMEDIATE RELEASE

PIXHAWK Student Design Team Wins Autonomous Micro Air Vehicle Competition Using Gumstix Overo Computer-on-Module

San Jose, California (October 14, 2009) – Gumstix, Inc. today announced that one of its global customers, the PIXHAWK Micro Air Vehicle Team, won the Indoor Autonomy Competition at the European Micro Air Vehicle Conference (EMAV) 2009 held in The Netherlands on September 17th, 2009. For its image processing, the PIXHAWK entry called the “PIXHAWK Pioneer” used the OMAP3530 processor-based **Gumstix Overo™ Fire** computer-on-module (COM) as its main onboard computer.

The EMAV conference and air robotic flight competition is a yearly event reflecting the advances in the micro air vehicle research field. The PIXHAWK Pioneer, developed in six months by a team of 14 students from ETH Zurich in Switzerland, won the indoor autonomy portion of the competition in large part due to its ability to show automatic image recognition and real-time image processing on a micro air vehicle. As the PIXHAWK Pioneer flew around the course, the Gumstix Overo Fire COM processed images from the USB machine vision camera in real-time. It also successfully detected the most difficult image – the only photograph -- out of ten images selected by the jury.

“The performance of the Gumstix Overo COM contributed significantly to the success of our team in the EMAV2009 Indoor Autonomy Competition,” said PIXHAWK Team Leader Lorenz Meier. “We were the only team capable of onboard algorithmic image recognition and our vehicle was one of the smallest to enter the competition. As a result, our fully-automated image recognition system scored many extra points.”

Meier adds, “I’m particularly happy that it paid off to do all processing onboard. We expected that this decision would be intelligent in the long run, and it seems like our strategy was correct.”

“Robotics teams have been designing our tiny Gumstix computers into their underwater, land and air UAV and MAV innovations for more than five years now,” said Don Anderson, EVP of Engineering Services at Gumstix, Inc. “PIXHAWK is the first team to have won a design competition by leveraging the high performance and even smaller size of our OMAP™-driven Overo series. This is also a win for Gumstix, as the PIXHAWK project marks the first instance of digital signal processing and code running on a Gumstix single board computer.”

The PIXHAWK team is offering their hardware and software as open source, as well as a series of in-depth tutorials on OpenEmbedded, Gumstix and MAV-related topics, on <http://pixhawk.ethz.ch/wiki/tutorials/start>. Their goal is to encourage other design engineers to contribute their computer visions on Gumstix Overo.

About PIXHAWK

The PIXHAWK project, started by Lorenz Meier as his ETH Excellence and Opportunity Award project in 2009, has evolved into a full-scale, on-going student team project involving 8-14 students per semester. It is 100% student run while being sponsored and advised by the **Computer Vision and Geometry Lab** at **ETH Zurich** in Switzerland. The long-term goal of the project is to enable fully autonomous operation of micro air vehicles (**MAV**). For more information, visit: <http://pixhawk.ethz.ch/>.

About Gumstix, Inc.

Founded in 2003, Gumstix develops, manufactures and markets small, open source computer-on-module products to customers in more than 50 countries worldwide. Gumstix is ideal for design engineers creating products for commercial, industrial, educational, robotic and research applications. For more information, visit www.gumstix.com.

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Gumstix Media Contact:

Rebekah Mitchell

415.860.0503

rebekah@rmcommunications.com