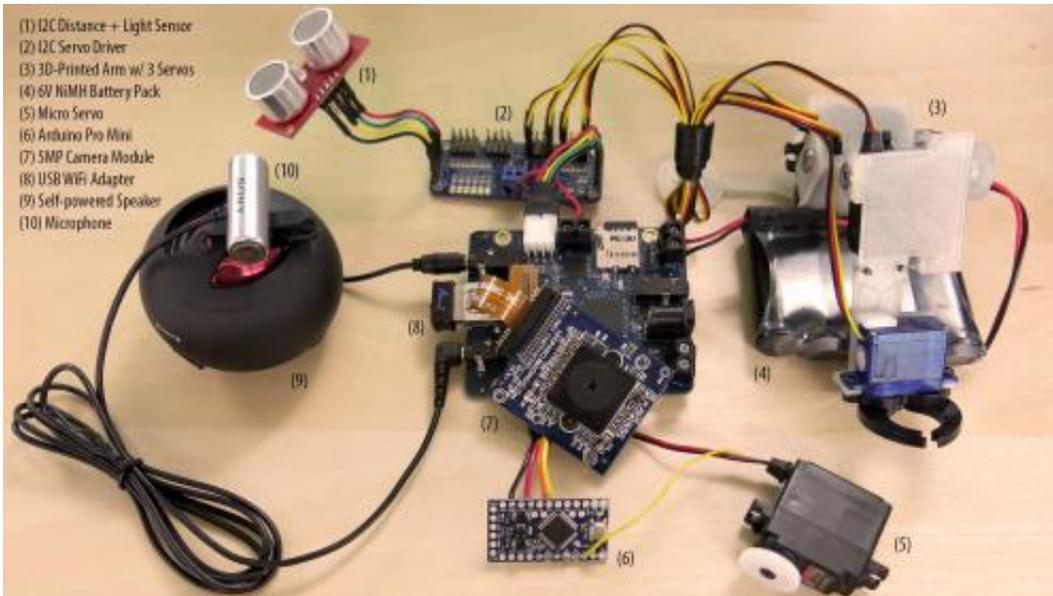


Startup has a way to put brains in DIY robots

January 15 2014, by Nancy Owano



(Phys.org) —Want to build a robot? Good. Want to add intelligence? Great. Two robotics innovators want to give makers an easy way to bestow brains on their robots. Meet Rex, a robot controller board, which is now in focus as a Kickstarter campaign. Rex is formally described as a palm sized, single-board computer for robots. It provides control over microcontrollers, sensors, and motor drivers, in a robot that the user has created, whether from a 3D printer or constructed out of metal, nuts and bolts. Rex, said its creators, streamlines the process of implementing intelligence into robotic projects.

John Biggs in *TechCrunch* called it a cross [between](#) a Raspberry Pi and an Arduino. While more expensive than a Raspberry Pi, it carries numerous features for the robot-builder: The experience of building a robot is "less of a pain" said the team, without "hassles for wiring," Also easing the way are the built-in battery inputs, and the ability to boot up directly into a robot programming environment.

The two creators behind Rex are former Carnegie Mellon Master's students and software and mechanical engineers, Mike Lewis and Kartik Tiwari, They met when studying robotics at Carnegie Mellon last year. They talked about an idea for a low-cost development package for robots. Lewis said, "As we continued to think about it, Rex seemed to make more and more sense for people who had already built Arduino-based robots but were having a difficult time stepping up to a more advanced platform."

The two formed a company, Alphalem in March last year to get things going. San Mateo, California-based Alphalem is described as a robotics and [artificial intelligence](#) company. Their first prototype for what would become Rex was delivered in October. They launched their Kickstarter campaign earlier this month, on January 2.

They are looking for \$90,000 in pledges. That figure comes after they received quotes from manufacturing houses for medium to high volume production. "Our funding goal is a reflection of these costs," they said.

Seeking pledges, they posted the basic model as starting at \$99, for a fully featured board (includes DSP and camera and microphone inputs, with the OS preloaded). Their OS is Alphalem OS, a Linux distribution, they said, built specifically for robots developed around Rex.

At its core, they added, is the Alphalem Development Environment

(ADE) which consists of scripts, sample programs written in C++, an API for communicating with devices connected to Rex over its I2C Expansion Ports, and a process management system for running multiple [robot](#) control programs (Tasks) in parallel. Alphalem OS also includes built-in drivers for a set of devices that Alphalem's team chose as the most useful for robots.

Targeted shipping dates are May and June. At the time of this writing, they had 231 backers with \$27,871 pledged of their \$90,000 goal.

More information: [www.kickstarter.com/projects/a ... the-brain-for-robots](http://www.kickstarter.com/projects/a...the-brain-for-robots)

© 2014 Phys.org

Citation: Startup has a way to put brains in DIY robots (2014, January 15) retrieved 25 April 2024 from <https://techxplore.com/news/2014-01-startup-brains-diy-robots.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--