AMPHIBIOUS SNAKE-LIKE ROBOT

ACM-R5 is a snake-like robot with extra dust sealing, waterproofing and a rigid structure that allows operation in dry conditions, as well as in environments with dust, water or other liquids. It is composed of several modules with small passive wheels that enable the robot to move smoothly on flat or rough surfaces.

ACM-R5 can also move sinuously in underwater environments. The front unit is equipped with a wireless camera, mounted on a special mechanism that keeps the view orientation always stable.

Whether the objective is research on amphibious locomotion, development of underwater applications, or inspection in extreme environments, ACM-R5 delivers reliable imaging and flexible mobility adapted to the present conditions.

Developed in cooperation with:

Tokyo Institute of Technology

New Energy and Industrial Technology Development Organization
**Mechanism**

Module dimensions: $\phi80\text{mm} \times 170\text{mm}$  
Length: depends on number of modules connected (1.75m for 9 modules)  
Degrees of freedom: 2 per module  
Mass: 800g / module (7.95kg for 9 modules)  
Maximum torque of joint: 9Nm  
Maximum speed of joint: 70 deg/s

**Sensing and Control**

Video camera: 1, mounted on head module  
Other sensors: installed per request  
Potentiometer: 2 in each joint, for position control  
Communication between modules: CAN Bus  
Communication between robot and controller: Wireless LAN

**Contact information:**

HiBot Corp.  
Meguro Daichi Hanatani Bldg. 801  
Shimomeguro 2-18-3, Meguro-ku  
Tokyo, 153-006,4 Japan  
phone: +81-3-6420-0445 fax: +81-3-6420-0446  
e-mail: info@hibot.co.jp (URL: http://www.hibot.co.jp/)

株式会社ハイボット  
〒153-0064  
東京都目黒区下目黒2-18-3  
目黒第一花谷ビル 801号