KIRIA KOREA INSTITUTE FOR ROBOT INDUSTRY ADVANCEMENT

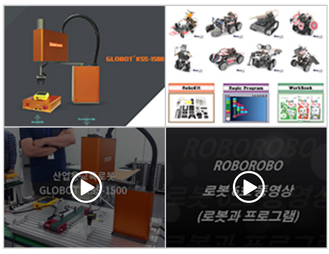
Previous

2016 vol. 3

K-ROBOT NEWSLETTER

KOREA INSTITUTE FOR ROBOT INDUSTRY ADVANCEMENT

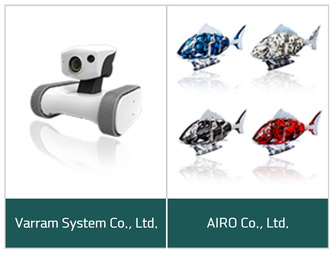
Educational Robot



DMBH Co., Ltd
www.dmbh.co.kr

ROBOROBO Co., Ltd
www.roborobo.com

Home Service Robot



Varram System Co., Ltd.

AIRO Co., Ltd.

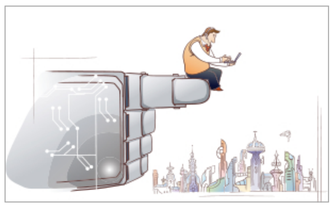
www.varram.com

www.airo.kr

GITEX 2016

The largest ICT exhibition in the Middle East, 'Dubai Information & Communication Exhibition' (GITEX) will be held in 'Dubai World Trade Center' from 16th to 20th of October. This year's exhibition will present not only products related to ICT but also large range of products such as robots, 3D printing and unmanned drone, etc.

The Activation and Expansion Project for SW Education of Robot Utilization



Before the implementation of a mandatory SW education for elementary, middle & high schools in 2018, the government has promoted 'The Activation and Expansion Project for SW Education of Robot Utilization' in full scale.

www.edunet.net

Status of Korea Exhibition [2016 SUPER ROBOWORLD PHOTOS]

Status of Korea Exhibition[2016 KOREA ROBOT FESTIVAL PHOTOS]

KIRIA KOREA INSTITUTE FOR ROBOT INDUSTRY ADVANCEMENT

Please inquire the following contact point if you have any question on robot or robot company.

Bucheon Techno park 401-1301(1), Pyeongcheon-ro 655, wonmi-gu, Bucheon-si,Gyeonggi-do, 14502, Korea
Tel : +82-70-8789-4561 / Fax : +82-32-234-5807
E-mail : global@icros.org
http://www.icros.org / www.RO13OT.com

KIRIA Webzine DOWNLOAD

ICROS Institute of Control, Robotics and Systems

Educational Robot
: DMBH Co., Ltd. & ROBOROBO Co., Ltd.

DMBH Co., Ltd. advances to the industrial & educational robot market in Southeast Asia.

DMBH has developed an educational robot business by utilizing an educational scholar robot (model name: KSS-1500) which was selected for the official robot in domestic skill competition event. DMBH has supplied this robot to Gumi Robot Meister High School and Jeonbuk Robot Meister High School for a school class and for educating employees.
This robot is composed of robot arms with four freedoms, main controller, and indicator. It supports the industrial robot language of SLIM standard by using an intelligent type simulator (iRodi). It is the first teaching aid robot that can repeat assembly and disassembly with 40 parts.

www.dmbh.co.kr

This year, DMBH plans to target the Southeast Asia markets with this leading industrial & educational robot. During this year, the company plans to establish a test bed in Malaysia and utilize it for a bridge to the advancement to the Southeast markets. Industrial robot has grown rapidly in Malaysia, and it is judged that the government has supported actively.

For this purpose, DMBH plans to establish a test bed in Unisel University in Malaysia, which is the college for industrial center. The company has a plan to utilize Malaysia Robot Association and automation group actively.

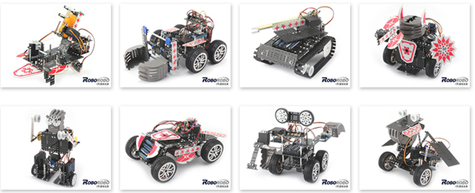
The company plans to install six sets of robot system to localize the operation contents and to promote the verification of effectiveness through the demonstrative education focusing invited customers. Especially, the company also plans to support marketing through the partnership with a local institution, MTDC(Malaysia Technical Development Center), the transferring of the A/S technology, and the preparation of contents supply basis. The company plant to found a skill competition event.

When the establishment project for the test bed is done successfully in Malaysia, the company, based on this, plans to promote the advancement to Indonesia market, which forms the same cultural zone geographically and religiously. DMBH expects the export of more than 1.5 billion won (135 units) to Southeast areas for the next three years through the expansion of export. The company has set a goal to prepare a foothold for the market advancement to not only Southeast area but also Middle East, India, and China.

ROBOROBO Co., Ltd. expands the base for robot coding education to overseas targeting infants.

ROBOROBO is the company that develops and supplies educational robot and contents. Recently, the necessity of STEM and coding education has been expanded worldwide, and the age level of coding education has been lowered. The recognition of robot coding education targeting infants has been increased in China and Mongol, etc. ROBOROBO has knocked the door of overseas markets in China and Mongol, based on the experience in business of robot coding education, that was accumulated in Korea.

In order to promote this business actively, ROBOROBO has a plan to utilize 'UARO', which is the robot education system for children (4-7 years) UARO is an optimum robot education system with which children learn interest and coding concept. It provides contents to learn the basic play and coding. Grafting robot, NFC communication and mobile application technology, it has been designed so that children can play while understanding the concept of coding.



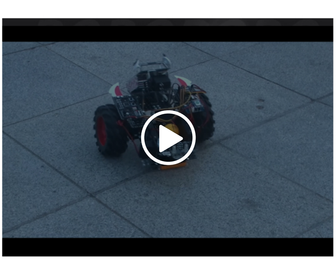
www.roborobo.co.kr

China, that ROBOROBO has paid attention on, has the early education market for children which reaches 25 trillion 60 billion won and the recognition for robot education has been raised highly. The monthly average education cost in Chinese household reaches 135 thousand won, which shows the high educational desire. It is judged that it is sufficient to win the educational robot industry in China if we mainly target kindergarten that Chinese households prefer.

This year in January, in order to evaluate the degree of satisfaction by customers, the company has implemented an investigation for the degree of satisfaction targeting clients in China. Based on this, the company has prepared one year education contents and completed the establishment of mass production system. ROBOROBO has a plan to open a curriculum for children's education at three places: Peking, Shanghai, and Ulaanbaatar : and to provide a total solution for the experience education that has secured an actual experience space.

Especially, ROBOROBO will make UARO video in Chinese version that can cause an attention to children and will promote at the existing education center within China directly, and utilize it actively in SNS. In case of China, the company has a plan to promote a strategy that utilizes business organization and business type of existing educational center (about 173 centers). The company has a strategy to target through the opening of robot classes for children (3-5 years old, children's class) within the center.

In order to pioneer Mongol markets, the company plans to provide support and education opportunity for low income level within Mongol jointly with NGO organization CISV Mogolia in Mongol. ROBOROBO has a plan to establish a test bed that connects four countries: Korea-China-Mongol-U.S. The company has a plan to advance not only to China and Mongol but also to the educational robot market of the U.S. For this purpose, the company promotes an establishment of joint corporation, an education for robot lecturers and a fostering project within the U.S. The company also has a plan to promote the establishment of a test bed through the opening of online lecture within the U.S jointly with clients in China.



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ICROS Institute of Control, Robotics and Systems

Home Service Robot : Varram System Co., Ltd. & AIRO Co., Ltd.

Varram System Co., Ltd., becomes a leading runner of home monitoring robot.

Varram System has actively promoted targeting a robot market for home based on 'Appbot-Riley', which is a smart home robot for monitoring. Appbot-Riley is a product that targets a niche of existing IP camera market. It is a robot that can wander every spot of house for monitoring, equipped with an invader surveillance function and an alarm service function. It is not just simply looking at the video but it is available to communicate in both directions in real time. The system is equipped with the functions of photo taking, video recording, and automatic charging system. It is available to identify family members with the application of user recognition algorithm.

www.varram.com

This year, Varram System plans to target the overseas market in full scale. The company already has proceeded with a funding campaign through a cloud funding site, 'Indigogo' and accomplished a performance of 170 thousand dollar sales. This year, the company has a strategy to lay a foundation of targeting overseas market more firmly by the opportunity to have been selected by the Korea Institute for Robot Industry Advancement for the market creation of robot supply business.

This year, in order to advance to the U.S, Varram System has selected 'Infinite Digital' as a sole distributor, which is the local company. In the future, the company, through Infinite Digital, will promote the recruitment of a local test group in the U.S, the establishment of a test bed for the experience in remote robot control, the collection and response for error and customers' complaints, and the verification of product under the internet environment of the U.S.

The company has a plan to proceed the verification for the continuous performance measurement of software and hardware, the measurement of interference elements, and the measurement of video quality through an Appbot server technology and not through a simple investigation and research on consumers.

As Infinite Digital has much experience in supplying products of TV, audio, and media to giant marts within the U.S in the level of marketing, the company is expecting much help for the advancement to the U.S market. The company will operate a local experience evaluation group.

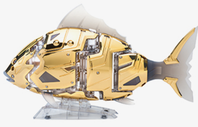
Varram System has set a sales goal of 10 million dollars to the U.S market in 2017 and tightened its schedule for the advancement to overseas markets. The company has already supplied samples to Spain and Dubai, and promoted to discover buyers in overseas such as in Italy and Sweden. For this goal, the company has a strategy to acquire the overseas certification standard and to actively promote a brand PR through a global marketing. Through this, the company has set an ambitious goal to grow as a representing runner of robot company for home.

AIRO Inc., dreams of the world with aquarium fish robots

A specialize company for the aquarium fish robot, AIRO Inc has a dream to advance to the world market, proudly presenting the aquarium fish robots such as a carp robot.

Major products, aquarium fish robot, 'MIRO'(Marine Intelligence Robot) can swim freely in the water like a real fish. 'MIRO' can be classified to a giant aquarium fish robot (53cm) and a mid size aquarium fish robot (35cm). Fish robot can swim with the maximum speed of 60cm per second and a rotational swimming is also possible. As sensor and electronic air bladder are mounted, fish robot can swim freely toward top and bottom, left and right avoiding obstacles. In addition, using Android application, it is possible to control by manual mode or automatic mode with a smart phone.

The aquarium fish robot of AIRO also has a strong merit to make various fish by changing skin design. Currently, it is available to cover the skin with 23 types of design on the same body. It is available to introduce various fish to the ufactured.



GOLD

RED

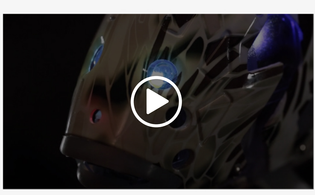
BLUE

WHITH

Recently, AIRO has released a new aquarium carp robot that received much love worldwide for its fancy pattern. The company also has presented an aquarium fish mounted with a camera. A robot mounted with a camera module can take pictures of environment inside the water tank in real time and send them through smart phone or tablet PC.

AIRO understands that there will be a demand around science hall, museum, educational center, robot exhibition center, and Kids Cafe; and plans to target mainly on this market. It is not just simply to supply aquarium fish but to promote a business toward a direction of raising the added value of the business in aquarium fish robot by supplying waterscapes such as aquarium tank, fountain, and pond experience facility.

A demand for aquarium fish robot has been increased around science hall and Kids Cafe in Korea. Fish robot aquariums have been installed and operated at Busan Marine Natural History Museum, HomePlus Ujeongbu branch, and Lotte Mall Gimpo Airport branch. Last year, AIRO sold total 20 units of robots in Korea.



This year, AIRO plans to promote the advancement to overseas market in full scale with an opportunity to have been selected for 'Robot Pilot Program for Market Creation' by the Korea Institute for Robot Industry Advancement. Considering the point that the preference of aquarium fish is different by the country, AIRO has a goal to expand the service market for aquarium fish that conforms to the situation of each country by preparing a customized exhibition space. For this purpose, the company has actively promoted the international certifications around areas in China, U.S, Japan and Europe.

AIRO already has a performance of exporting 15 units of robot through a partnership company in China last year. This year, AIRO plans to focus mainly on the markets of Vietnam and Malaysia. AIRO plans to establish a test bed for an overseas markets of Kids Cafe brand, 'Play Time' at major techno-parks such as Lotte Mart, Hochimin branch in Vietnam and Kuala Lumpur in Malaysia, etc.

Based on the establishment experience in test bed, AIRO plans to advance to the markets in Singapore and Southeast Asia in full scale. Based on the last year's exportation experience to China, AIRO will advance to the Chinese market in full scale. AIRO has a goal to target focusing on Science Parks in China.

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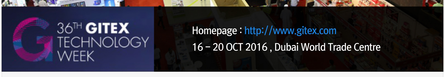
The Activation and Expansion Project for SW Education of Robot Utilization



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Isan Solution Co., Ltd. : Isan Solution has a plan to stand out the image of a company who creates a new paradigm of robot by combining high-tech robot technology with various education & culture project. Major products to introduce are 'Coblo' and 'Codestar'. Coblo is a robot education tool with a type of toy block for the creative coding habit by small children. Children can learn the coding habit through story telling. It is made of easy and convenient eco-friendly luxurious wooden material to accomplish the coding education without computer. Codestar helps children to sense the light, sound and movement, and to experience the motion principle of hardware, and to increase the thinking skill of computing while they practice coding easily with fun. Isan Solution has developed the active marketing activity through giant exhibition for small children and educational fair held in domestic and overseas. Through this exhibition, Isan Solution has a plan to prepare the foothold of advancement to the Middle East.

Coblo

Codestar

www.isans.co.kr

HelperRobotech Co., Ltd. : HelperRobotech is a professional company for agriculture. After the foundation in 2003, the company has pursued the development of technology of an automation facility for raising seed and the expansion of market. The company has progressed the development of automation facility jointly with the Institution of Agricultural Science & Technology and accelerated the technological development with a goal to accomplish a general system of automated nursery.

Major products are an automated sowing system, a fruits & vegetables grafting robot, and a cylindrical paper port sowing system. In this exhibition, the company mainly plans to introduce a grafting robot of vision recognition, a sowing robot system of cylindrical paper port, and a transplant robot system of potted plants. The company has achieved a supply result of fruits & vegetables grafting robot to countries such as Turkey, etc.

www.hrc365.co.kr

Agronics Co., Ltd. : Agronics develops and supplies a robot for crop management in plant factory and cultivation equipments. The company has supplied a solution for the plant factory by grafting ICT technology with agriculture. Crop management robot for plant factory and cultivation equipment are the main products that consist of an automatic receiving & discharging equipment for plant cultivation bed, an automatic environment control equipment (temperature, humidity, light amount, light cycle, carbon dioxide, and air conditioning), a control equipment for nutrient management and management cycle for each period by cultivating crop, and a cultivation equipment of multiple stack type (building type). Since 2013, the company has consulted about the plan to supply cultivation equipment and cultivation facility to Qatar. Through this exhibition, the company plans to progress consultation mainly about the introduction of test facility with Middle East countries.

www.agronics.co.kr

JINI Co., Ltd. : JINI has mainly supplied 'jiniORDER' and 'jiniPAY'. A representative product jiniORDER is a service system that, based on the robot technology and video recognition technology, supports the real time inventory management in stores and the establishment of sale promotion strategy and its operation. The company utilizes artificial intelligence technologies such as robot and deep learning for the equipment to collect the information for real time inventory. It is possible to promote the sales & service by using a store inventory computation, a supplementary assistance to insufficient inventory, and a Digital Information Display of robot.

Through this exhibition, JINI plans to negotiate for product supply with banks in the Middle East such as Saudi Arabia, Oman, Bahrain, and Kuwait. The company has a main policy to propose a robot technology that can be utilized by the financial institutions.

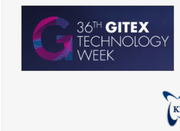
3S Solution Co., Ltd. : The company is specialized in Samsung ODD, which has expanded the business to the manufacturing area of Bluetooth equipment and communication network equipment. Since 2011, the company has promoted a development of mini rotary blade unmanned drone. The company started the mass production of a commercial drone, ATO-I in 2013 and initiated a research on a racing drone, ATO-R since 2014. This year, the company has developed and sold an exclusive toy drone for smart phone, ATO-T for children. Through this exhibition, the company plans to check the possibility to advance ATO-T to overseas market. The company also plans to advance a commercial drone, ATO-I to overseas' B2B market.

www.3ss.co.kr

ROBOTRON Co., Ltd. : The company has mainly supplied an educational robot. The educational robot of ROBOTRON supports robot assembly, computer programming, and programing algorithm learning. The company provides a self developed software to help children run motion program directly and adopts nontoxic plastic frame and parts to help children use easily. The company has adopted a rivet type to execute assembly and disassembly fast. ROBOTRON has exported products to countries of Japan, China, Indonesia, Dubai, Germany and Spain. Through this exhibition, the company plans to present various new educational robots and to proceed negotiations with local educational institutions and Lego education companies.

www.robotron.co.kr

The company has actively participated in a group of market pioneering, targeting countries in the Middle East such as Iran and Qatar and put an effort to prepare a bridge to advance to the Middle East. The company already has procured customers in those areas such as Saudi Arabia, Dubai, Qatar and Egypt.



Homepage : http://www.gitex.com
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The Activation and Expansion Project for SW Education of Robot Utilization

Before the implementation of a mandatory SW education for elementary, middle & high schools in 2018, the government has promoted 'The Activation and Expansion Project for SW Education of Robot Utilization' in full scale.

Facing the fast change to 'Software Centered Society' that determines the national competitiveness, a promotion in this policy of mandatory SW education will provide students in elementary, middle & high schools with an opportunity to learn software and will foster creative talented people who will lead the era of creative economy. The SW education of robot utilization has a goal such that students will understand the concept of software and coding and learn about the resolution of problems through creative methods while students operate actual robots

Examining actual curriculums in schools, students in elementary school will learn about the understanding of SW, the function and structure of robots, and the elements and structure of programing in actual class hours. Students in middle school will learn about the understanding of algorithm, the control structure, the operation principle of computing system in the information subject.

According to the promotion plan for the SW eduction of robot utilization by the government, the government would prepare the basis of SW education of robot utilization such as an operation of testing school and a purchasing of robots in 2015, and the expansion of testing school, the expansion of training for teachers, the operation of experimental classes for students, and the expansion of global exchange in 2016. In 2017, the government will promote a complete support system for school fields (foster a group of supervisors, and lecturers) and the expansion of distributing teaching & learning materials.

This year, KERIS (Korea Education & Research Information Service) who supervises the SW Education Project of Robot Utilization, has received a project support for market creation and robot distribution from KIRIA (Korea Institute for Robot Industry Advancement) to promote the projects such as the reinforcement of SW education of robot utilization by leading schools, the development of education contents, and the training for teachers.

Examining in detail, the project contains the operation and management of SW education of robot utilization by 900 leading schools, the operation of training courses for teachers of SW education in middle & high schools, the development of contents for a remote training of SW education, the training of 200 leading teachers for SW education, and the development and distribution of contents for students of SW education.

Leading schools have been continuously increased, which will be 900 schools in this year and 2,000 schools in the next year, and 10,000 schools in 2018. The government will promote the operation of testing classes and the hosting of robot competition, the establishment and operation of permanent experiment center. At the same time, the government has set a goal to support the global market advancement of domestic educational robot package.

To promote such project, KERIS has decided to promote the partnership event with relevant domestic institutions such as KOFAC (Korea Foundation for Advancement of Science and Creativity), the development and distribution of excellent projects(PR through website and a group of supervisors), PR to visiting foreigners through the operation of KERIS Future Experiment Hall, the partnership with teachers for global exchange and the case development, and the establishment of a cooperative system by public, government and academy(robot related companies, testing schools, KERIS). Through this project, KERIS expects to accomplish the support to foster talented people of creative integration type, to foster domestic robot industry, and to develop a model for global exchange & cooperation.

In the meantime, in order to activate the software education of robot utilization, it is necessary to have robots for education. Category of educational robots can be largely classified to 'Teaching Robot' and 'Teacher Assistance Robot'. The teaching robot means a robot that can either educate the robot technology itself or can be utilized for the education in other areas such as mathematics and science. The teacher assistance robot means a robot that saves learning contents and assists teachers or that helps the improvement in the educational environment of teachers regardless of education contents. In order to activate the software education of robot utilization, both teaching robot and teacher assistance robot should be developed.

This year, KERIS has proposed 17 robots that can be utilized for SW education of robot utilization. It seems close mainly to the teaching robot. These robots are the ones that can be controlled by the software, which has a characteristic of possible movement by robots. It is also possible to interconnect with the programing languages for education such as self SW, entry, scratch, python, and C language.

'EDUNET', an internet site operated by KERIS, has introduced this in detail: an automobile robot by ROBOTIS, a hamster by ROBOMATION, a robo kit by ROBOROBO, a smart robot Nuri-Atti by SK Telecom, a RQ robot by ROBOBUILDER, a ROBOTAMI creative by ROBOTRON, a code star creative kit by Isan Solution, rocket smart & drone kit by ROBOLINK, and an ALTINO by SAEON. The government expects these educational robots to contribute to broaden the understanding of software education for students in practical education field.

Robotist
(WAIKAY SCIENCE)

ARTEC Japan

ALTINO

SAEON Co., Ltd.

Albert Coding Package including Hamster Robot

ROBOMATION CO., Ltd.

bitBrick Robot set

Hellogeeks

ROBOTIS Robot Car

ROBOTIS Co., Ltd.

Robotami Creative

Robotron

Codstar Creative Kid

Isan Solution Co., Ltd.

D PLAY

Dples

Dio

Apptronics

Cubo Scratch

Rossi Co., Ltd.

Robo kit series

ROBOROBO Co., Ltd.

ROKIT Smart & DronKIT

Robolink Co., Ltd.

Smart Robot NuriAtti

SKTelecom

EPOR

X-BOT Co., Ltd.

TORI SCRATCH

Life & Science

CUBEWORKS
S/W Education KIT

ROBOWORKS

RQ ROBOT

ROBOBUILDER

School of
Engineering Coding

New Education Co., Ltd.

EDUNET 정부3.0

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