EUCLID LABS

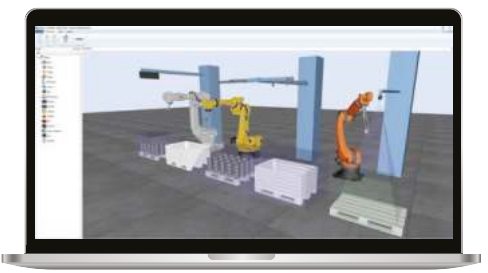
MARS

A SOFTWARE TO RULE THEM ALL!

DESIGN | SIMULATE | COMMISSION | RUN

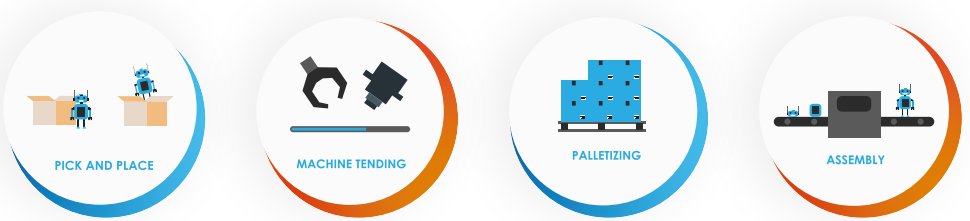
WHAT IS MARS

MARS is a software tool for developing, simulating and starting up robot workcells minimizing the commissioning time. The user can develop robotic applications of "pick, inspect, place/palletize" even without deep knowledge of robot programming and vision thanks to a high-level programming language, independent from the robot, scanner and camera brand. Robots and cameras, either 2D or 3D, are simulated allowing the development of new applications without the need for real hardware. NAK3D by Euclid Labs, Visio Nerf Cirrus 3D, Zivid One+ and Zivid Two by Zivid, and Photoneo PhoXi 3D scanners are currently supported; 2D cameras from Basler and IDS are available. Cell's components (robots, scanners, cameras, and many others) can be easily imported into the project from the libraries available online.



With MARS you can build a digital twin of your still unborn project:

- cell logic and robot trajectories are both the same when connected to the simulated components and the real hardware;
- complete simulation of the positioning tolerances of the real pallets, bins or baskets;
- full collision check on the “simulated real environment” during the simulation to detect object localization issues;
- the same HMI is used when operating both in simulation or real mode.



WHAT CAN I DO WITH MARS

- Virtual commissioning
- Vision perception (localization)
- Inspection: detect the presence of features such as holes, weld nuts and trims by using 2D/3D cameras
- Robot motion planning
- Application programming (PLC process flow & logic programming)
- Full cell simulation
- Data Collection: easy configuration for production performance monitoring including data visualization dashboard and ability to connect to your existing MES
- Engineering Graphical User Interface (GUI) for cell setup
- Human Machine Interface (HMI) for production screens
- Low code programming thanks to an automatic code generation

APPLICATIONS DEVELOPMENT IS AS EASY AS 1, 2, 3

DESIGN

Create 3D cell environment, simulation, HMI and logic.

VIRTUAL COMMISSIONING

Run full simulation to validate vision, robot paths, process logic and cycle recovery.

SIM TO REAL

Calibrate, configure communication and put cell into run.

MARS BENEFITS

LABOR REDEPLOYMENT

By utilizing MARS and 3D vision guided robotics, staff can be redeployed to more productive tasks which can help to generate cost savings.

DECREASE IN PROJECT LAUNCH TIME WITH VIRTUAL COMMISSIONING

With MARS and its full simulation capabilities, you can validate your programming prior to hitting the floor. With virtual commissioning, you can see a reduction in project execution times of up to 30% compared to conventional solutions.

AVOID POTENTIAL ISSUES WITH FULL SIMULATION

Utilizing MARS and its full simulation capabilities means that you can identify issues before the cell being built.

SIGNIFICANTLY REDUCE OPERATOR SAFETY ISSUES AND ERGONOMIC INJURIES

Many machine tending situations have operators handling sharp or heavy parts. By utilizing 3D vision-guided robotic bin picking, these potentially hazardous situations can be avoided.

INCREASE IN PRODUCTIVITY, SAFETY, SPEED AND ACCURACY

Robots can help to increase productivity and efficiency of operations as they are not faced with some of the day-to-day human challenges and requirements such as sickness, the need for breaks, sleep and employee fluctuation.

MARS KEY FEATURES AND FUNCTIONS

SOFTWARE-BASED SOLUTION TO BE HARDWARE INDEPENDENT

Compatible the most popular robot and vision system manufacturers (others can be added as necessary).

ONE COMPLETE TOOL FOR "PICK-INSPECT-PLACE"

Utilize the all-in-one 3D MARS environment to design and program your cell, from layout, robot reachability studies, robot path, logic, and HMI programming to full simulation, vision configuration, validation and running.

SINGLE AND MULTI-USER COLLABORATION

Independent user logins with configurable user permission levels hosted locally or in the cloud.

AUTOMATIC COLLISION CHECKING

MARS validates a collision-free path for all robot movements.

HMI EDITOR

HMI programming environment integrated into MARS.

SUPPORTED ROBOTS

FANUC ABB

KUKA

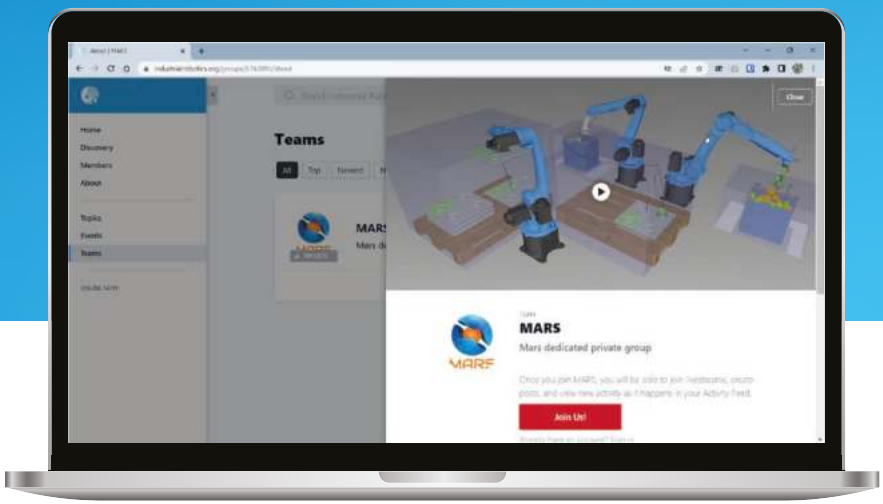
SUPPORTED SENSORS

Scan and download your 30-day free trial software!

Training

Video lessons are available for free on industrialrobotics.org platform.

industrialrobotics.org



All training videos are fully available for free on

www.industrialrobotics.org

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