

trinity

EASY PROGRAMMING MODULE PRODUCTION MANAGER VERSION

 www.trinityrobotics.eu



The TRINITY project has received funding from the European Union's Horizon 2020 research and innovation programme under the GA 825196

Easy programming module Production Manager version

- Presenter: Jean Hoyos
jean.hoyos@flandersmake.be
- Contact: Raheel Afzal
raheel.afzal@flandersmake.be



Training objective

This document provides a global insight of the module functionalities, requirements and adaptability in order to be used in production



Module component

- Goal of module is to reduce reprogramming cost due to product variance
- Allowed low-skilled operator to program/reprogram robot application from a HMI (Human-Machine Interface)
- Complex applications can be generated by combining different skills



Module environmental requirements

- Module consists of a computer and a GUI (screen) and can be used to interact with any hardware (robot, cobot, sensor, camera, ...)
- Safety requirements will depend on the selected hardware. For a collaborative robot, no fence is required
- The interaction with the easy programming interface can be done through mouse or tactile screen. This latter requires a low dust environment.
- No restriction regarding the noise is to be considered



How to integrate this system with the rest of the production line?

- This module role is to orchestrate agents (e.g. robot/cobot and gripper). Additional hardware can be added in order to control additional agents
- At this stage, this orchestrator can not be externally controlled. Adding this functionality would require additional programming effort
- The module allows to easily:
 - Program a new robotics application for a specific product
 - Adapt an existing program for a new product variant

This module is suited for production line that needs to produce low batch size product and want a minimal downtime in order to perform the product changeover



Describe adaptability of the system

- This module is suited for manufacturing application with low batch size and large product variance
- In order to be used in the production line (with specific robot arm and gripper):
 1. Develop specific driver to control the selected robot device and gripper
 2. Available skills allow to achieve pick, place and trajectory skill execution
 3. In order to create specific skill
 - Need to create skill in DB, framework and device driver
 - Program skill functionality in device controller



More information on the use-case and associated module is available in the Trinity official website



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AGILE MANUFACTURING

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Thank you!

Jean Hoyos

Flanders Make – jean.hoyos@flandersmake.be



info@trinityrobotics.eu



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