



EMULATE3D

by ROCKWELL AUTOMATION

EMULATE3D CONTROLS TESTING

Test Your Control System Offline with Emulate3D

Reduce Commissioning Time and Costs with Virtual Controls and PLC Testing

Emulate3D Controls Testing software enables you to test and debug your control system offline, before the real equipment is built, and without disrupting existing production. Take logical testing off your automation project's critical path and work efficiently in parallel with the system build and installation. Reduce commissioning time and costs, and speed your time to market by running logic tests on your system's Dynamic Digital Twin in a safe and controlled virtual environment before going on site. View, control, and demonstrate your machine within a virtual reality (VR) environment for maximum impact. Invite your clients to join the VR experience by logging in to your model remotely, so you can discuss the latest project changes. With Emulate3D technology, meetings can be spontaneous, more frequent, and with practically no carbon footprint.

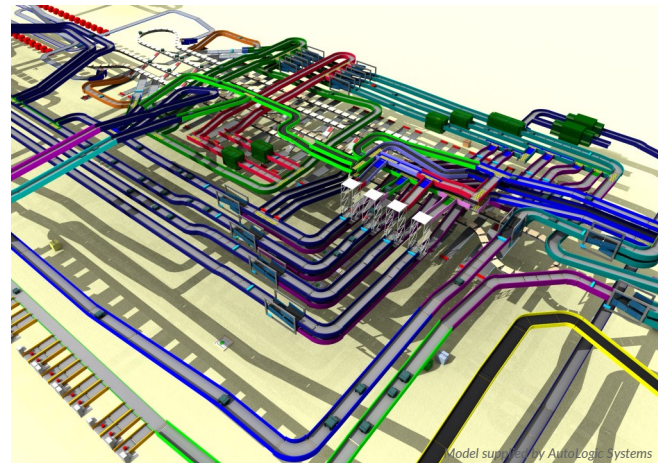
The Benefits of using Emulate3D Controls Testing:

- Take logical controls testing off your project's critical path
- Test automation systems thoroughly under controlled conditions
- Significantly reduce onsite commissioning time and costs
- Create robust, fully-tested controls safely, on time, within budget

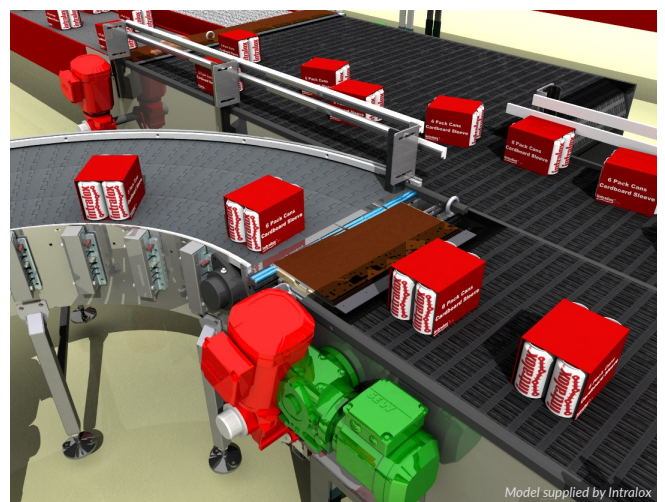
TEST YOUR CONTROLS WITH A TRUSTED DYNAMIC DIGITAL TWIN

Virtual commissioning users connect accurate models featuring low-level elements such as sensors, actuators, and motors to the control system. By creating a controlled arrival pattern of products into the model, events are generated and inputs changed as sensors are blocked and cleared. The control system responds as it would with the actual system, and the Dynamic Digital Twin reacts and reflects reality accurately.

Emulate3D Controls Testing (ECT) models combine generic equipment primitives with CAD data, control element properties, and PLC IO connections within the model environment to generate your virtual system with minimum effort. Your automated solutions will be ready to test faster with Emulate3D.



Model supplied by Autologic Systems
Airport Baggage Handling systems can be tested for a wide range of operational situations



Model supplied by Intralox
Use ECT to test single machines or complete Automated Material Handling Systems



Call 801-923-3316 or email info@demo3d.com

Emulate3D from Rockwell Automation
5513 W 11000 N, STE 504
HIGHLAND, UT 84003
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Search for Emulate3D

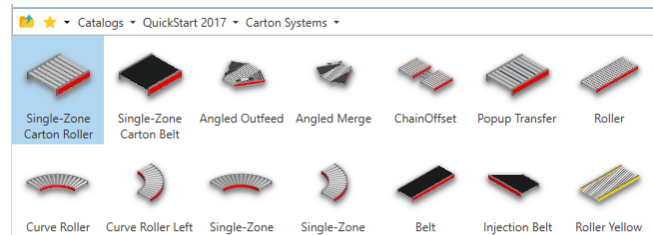


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Develop Fully Tested Control Systems On Time, Within Budget

Emulate3D models are built by assembling standard equipment elements from generic catalogs and connecting their IO to a wide range of PLCs, or higher level controllers. Users can create company-specific catalogs of operational equipment to accelerate their workflow, and Emulate3D's open framework also enables connections to other company applications. Emulate3D offers a SOLIDWORKS add-in which helps machine builders develop controls testing models within the CAD product, and users can generate models automatically from their existing product configurators.



Building Emulate3D Controls Testing models is fast and straightforward using catalog items

When models are run, each virtual load or product is detected by sensors and then processed, transported, manipulated, pushed, or queued within the system in response to the control outputs, just as it would be in the real machine. Users observe the behaviour of the running model, and carry out control logic changes if necessary, before running the model again to verify the effects of their modifications.

CONNECT TO A WIDE RANGE OF CONTROL SYSTEMS

Emulate3D Controls Testing is used to model a wide range of externally-controlled systems, often connected to several controls at different levels. Model types frequently created and tested by users include baggage handling, automotive systems, distribution centers, sorting systems and individual machines.



TRAINING AND SUPPORT

We offer training and support services to meet your needs. Experience shows a program of two-hour online sessions to be the most effective way to bring you up to speed and get you operational, as well as being convenient to schedule. If you'd prefer face to face training, however, we can provide that too.

LEARN MORE NOW

To find out more about how Emulate3D technology can help you, contact us for a 90-minute online presentation. If you'd like to try it out, register for a seat at the online Introductory Workshop at WWW.DEMO3D.COM



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Control element properties can be accessed and modified within the CAD environment

PLC CONNECTIVITY

PLCs - Allen Bradley: ControlLogix, CompactLogix, MicroLogix, SLC500, PLC5 - EtherNet/IP, PCCC, RSLinx - Auto-optimization: Protocol analysis, tag database analysis, tag merging
Beckhoff: TwinCAT 2 and 3 - ADS **B&B:** Automation Studio - PVI **Mitsubishi:** FX, MELSEC-Q Series, MELSEC iQ-R Series - MX Component, GX Works2, MT Developer2 - GX Works2 integration: Import tags from GX Works2 project **Omron:** NJ, NX, CJ Series, Sysmac Studio - Ethernet/IP, OPC **Schneider Electric:** Modicon M340, Quantum, and others - Modbus, OPC **SEW:** MOVI-PLC - OPC, Modbus **Siemens:** S7-300, S7-400, S7-1200, S7-1500 - PROFINET, PROFIBUS, S7 Functions, MPI, PUT/GET, Fetch/Write **Unitronics:** Modbus **Others:** OPC

Protocols and Field Buses - CANopen - DeviceNet - Allen Bradley - EtherNet/IP - Allen Bradley (ControlLogix, CompactLogix), Omron, and others - Fetch/Write - Siemens - Modbus - Schneider Electric, Unitronics, and others - MX Component - Mitsubishi - OPC - Any PLC with corresponding OPC server - PCCC - Allen Bradley (MicroLogix, SLC500, PLC5) - PROFIBUS - Siemens, and others - PROFINET - Siemens - PROFISAFE - Siemens - RSLinx - RSLinx 5000 Emulate, Allen Bradley PLCs over hardware links - S7 Functions / MPI - Siemens - Simulation Unit (SIMBA) - Siemens

Hardware and Field Bus Gateways - Beckhoff Field Bus Cards - FC312x PROFIBUS - FC512x CANopen - FC520x DeviceNet - QTS AN-X - PROFIBUS - SST Woodhead PCI - PROFIBUS - Siemens Simulation Unit (SIMBA) - PROFIBUS, PROFINET, PROFISAFE

Servers - Emulators - MicroLogix 1100 - Siemens PROFIBUS DP-DP Coupler - HMI and SCADA testing - S7 Functions PUT/GET server - Modbus server (configurable function code support)



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