

## THE COMPLETE SOFTWARE SUITE TOOL FOR AUTOMATISMS TEST, TRAINING & SIMULATION



### Key Features:

- *With EasyPLC you will be able to write programs as if you have been working with a PLC, using the more common languages like Ladder, Grafcet, Logic Blocks or Script.*
- *Use the HMI System to create the Human Machine Interface, to communicate the computer with users.*
- *If you want to simulate your program and you do not have a physical system, use the Machines Simulator software, where you can use a real 3D world with physics to test your programs with the machines that you can create or with the predefined ones.*



### Product Feature

With EasyPLC you can use a personal computer to make automatism control, test, training and simulation.

The main characteristic of EasyPLC is that it emulates the operation of a PLC, using the programming languages most used in the industrial world: Ladder, Grafcet, Logic Blocks Functions and Script.

EasyPLC is the perfect tool to learn how to use the automatic control systems used in the industry, only with your Personal Computer, the EasyPLC software and an input/output interface (optional).

### Software Modules

EasyPLC Software Suite is composed by EasyPLC Editor, Virtual PLC CPU, HMI System, Machines Simulator, Machines Simulator Lite and Machines Simulator VR, Tutorial Package Manager with 20 exercises and Nirtec Server License Manager.

- EasyPLC Editor is used to create, edit and debug the logic programs.
- Virtual PLC CPU emulates the PLC operation, executing the logic programs.
- HMI System is the program that offers the program interface between the users and the PLC. With this tool you can create Screens easily to make the information exchange.
- Machines Simulator for Windows offers a virtual 3D world with real time graphics and physics where the PLC programs can be tested.
- Machines Simulator Lite allows to use an Android device to simulate your virtual systems in portable devices
- Machines Simulator VR introduces you to virtual reality through a VR headset compatible with Steam VR

(The software modules are sold separately)



### Applications

You can use EasyPLC to make automatism control, training, simulation, initiation in the world of the PLC's, robotics, etc...



With Machines Simulator you can create your own systems or use the predefined to automatize and test your PLC logic

### Minimum Hardware Requirements:

Processor: Compatible with the SSE2 instruction set  
 RAM: 4 Gb.  
 Disk Space: 5 Gb of free disk space.  
 Graphics card: Support DX9 (shader model 3.0) or DX11 with level 9.3 function capabilities  
 A Sound card installed is necessary.

### Operative System Compatibility:

Windows 7/10/11 (x32/x64).  
 Machines Simulator Lite is designed for Android devices.

### EasyPLC Connections

EasyPLC can be compatible with any I/O analogical/digital device designed for Windows 7/10/11. Using the EasyPLC SDK utilities is possible to develop the drivers to manage them with EasyPLC or Machines Simulator

EasyPLC & Machines Simulator can be compatible with any commercial PLC using the available I/O devices at [www.nirtec.com](http://www.nirtec.com) or any third party I/O devices.

### Machines Simulator Characteristics

Machines Simulator offers a virtual 3D world with real time graphics and physics where the PLC programs can be tested.

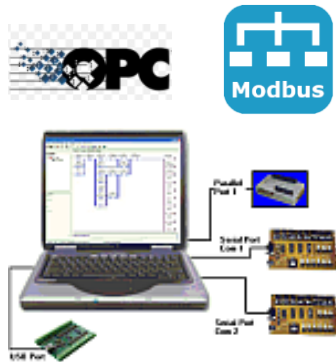
Select the necessary components from the Machine Simulator editor library to build your machine, configuring the Input/Output assignments and the specific elements characteristics in a very easy way. In the editor library, you can find different kinds of sensors and actuators like photocells, inductive switches, electric motors, transporters trays, elevators, and more.

If the components you need are not available in the library, you can use the components Editor to create your own mechanisms, devices ...

### Machines Simulator VR

Do you want a more real experience? test Machines Simulator VR, the software designed for Virtual Reality!

Once you have created your system with Machines Simulator Editor (or using the already predefined systems), launch Machines Simulator VR, put your headset and enter in the REAL VIRTUAL WORLD, touching the environment, sensors, pallets, boxes, etc... You will test the virtual system like you were in the real world, a really amazing experience...



### Compatible for all Systems

You can use Machines Simulator to test the EasyPLC logic programs or the PLC programs made with any PLC system, to do it, you must use an external EasyPLC hardware I/O Interface to communicate with the PLC and use the EasyPLC simulated I/O to interface the PLC signals with Machine Simulator. Also, you can interface third party automation software or PLC systems using the standard communication protocols like OPC DA/UA or Modbus

### Machines Simulator benefits

For students:

A great problem for automatism students is the lack of resources to practice the acquired knowledge. Imagine a virtual 3D world where you can practice with all kinds of machinery.

For professionals:

Do not take a risk of damaging the machinery through a programming error. Make the programs prototypes before the machine is concluded. Show to your customers how the system will work before being built.



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