*News Release*

# CyboSoft Releases New Version of MFA Control Toolset for LabVIEW Software that Supports Linux for NI Compact-RIO

January 3, 2023 – CyboSoft (Rancho Cordova, California), the developer of Model-Free Adaptive (MFA) control technology and products, announced today that it has released a new version of MFA Control Toolset for LabVIEW Software that supports the Linux operating system embedded in National Instruments compact-RIO.

CyboSoft introduced the first version of MFA Control Toolset for LabVIEW Software in 2004. The Model-Free Adaptive (MFA) technology has long been considered an industry breakthrough and MFA is the only commercially successful smart controller that does not require mathematical models. LabVIEW from National instruments is the most widely used software for testing, measurement, and control. The MFA Control Toolset for LabVIEW Software has been widely deployed in aerospace, automotive, biotech, chemical, metal, oil and gas, pharmaceutical, water and wastewater industries.

CyboSoft CEO Dr. George Cheng said, "There are many customers who have been using the VxWorks version of NI cRIO with MFA controller VIs for the past 10 to 15 years. Since all new cRIO models are Linux based, we are offering this new version of MFA Control Toolset Software to support the new cRIO and for the customers who need to replace their "end of life" cRIO equipment."

As shown in the following images, the left is the LabVIEW function palette containing 25 different MFA controller VIs for Linux. The block diagram on the right shows an MFA controller VI connected to an FPGA I/O point in LabVIEW.
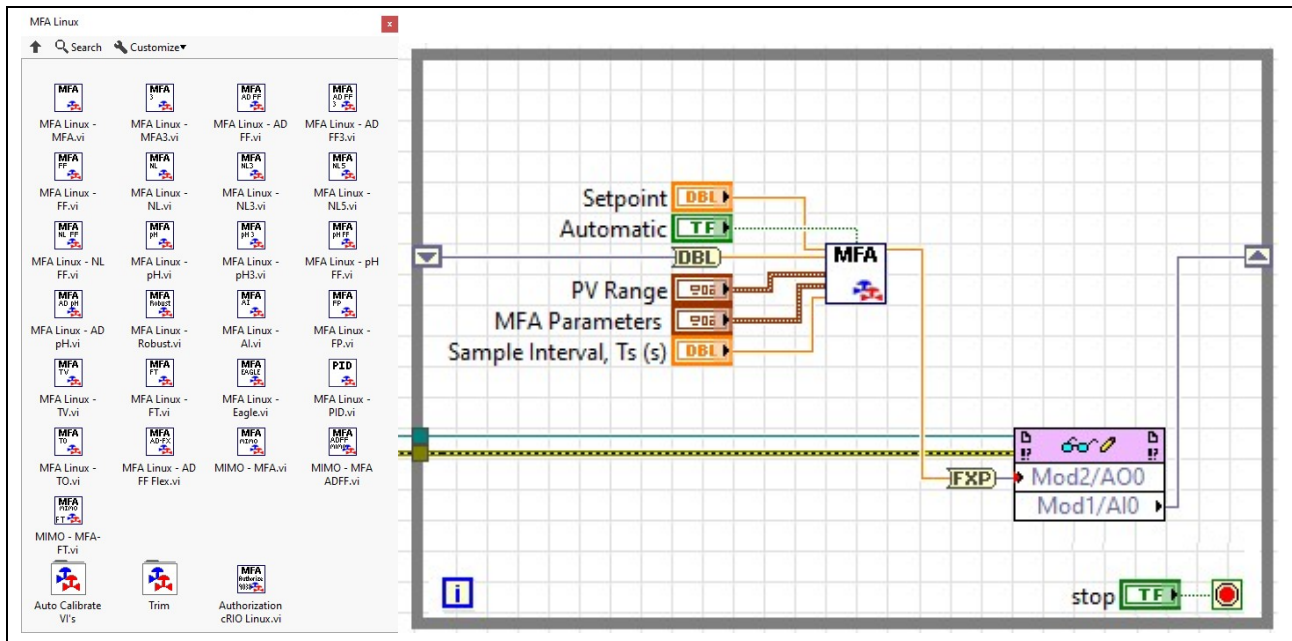
When PID (Proportional-Integral-Derivative) control is not able to control a problematic loop such as a pH process, a LabVIEW user can select an appropriate MFA controller from the MFA Control Toolset to effectively control this difficult loop. No process model is required to launch an MFA controller, and no controller manual tuning is required once installed.

CyboSoft has developed various MFA controllers, each of which solves a tough control problem, including:

- SISO MFA controller to replace PID controller to eliminate manual tuning,
- Nonlinear MFA to control extremely nonlinear processes,
- Anti-delay MFA to control processes with large time delays,
- Robust MFA controller to force the process variable to stay within defined bounds,
- MFA pH controller to control pH processes,
- Anti-delay MFA pH controller to control pH processes that have large time delays,
- Feedforward MFA controller to deal with measurable disturbances, and
- MIMO MFA controller to control multiple-input-multi-output (MIMO) processes.

CyboSoft introduced the CyboCon MFA Control Software at the ISA (International Society of Automation) Show in 1997. The artificial neural network (ANN) based MFA control is an AI technology. Thus, CyboSoft can be considered an AI pioneer. Now, MFA has become the only commercially successful smart controller that does not require mathematical models. Due to its smart and general-purpose nature, MFA can make major contributions in the 4th Industrial Revolution, where smart sensors and controllers are needed for lights-out factories and smart equipment, machines, and devices. The MFA controllers available in LabVIEW provide a user-friendly deliverable platform to control smart devices and equipment.

**About CyboSoft**

CyboSoft is the leader in control technology serving the worldwide process control, building control, and equipment control markets. CyboSoft's patented Model-Free Adaptive (MFA) control technology for automatically controlling physical processes is a major breakthrough. No other comparable technology possesses all the attributes of MFA. CyboSoft received the 2007 Frost & Sullivan "North America Technology Leadership Award" in the field of Industrial Automation. MFA is the only commercially successful smart controller that does not require mathematical models.

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