

# Pioneer of Soft Motion

Advanced Motion Control  
On Commercially Available PC

Technology Proven By Equipment Manufacturers Worldwide

EtherCAT Supported

Max 64 Axes

Robot Control Included

## Multi-Axis Motion Controller

 **WMX2**  
*For EtherCAT*

EtherCAT®

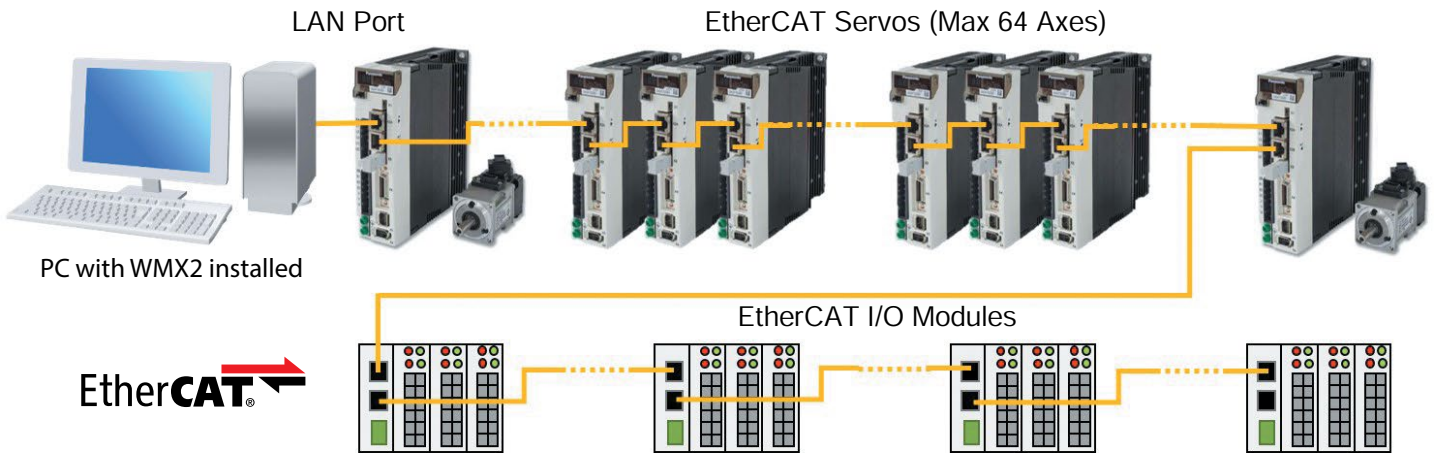


- High-performance motion control functions and I/O control features
- Multitude of industry-leading advanced motion and EtherCAT functions
- RealTime Windows Soft Motion Controller capable of simultaneously controlling 64 axes of servo and over 10K of I/O at 0.5 ms cycles

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 **SOFT SERVO**

<http://www.softservo.com>



## Stand-Alone All in One Package

EtherCAT Master

RealTime Driver

RealTime OS

Motion Control API

Robot Control API

Network API

Simple GUI

Network Configurator

## Specification

No. of Axis, Channels	Max 64 axes, up to 64 channels
Interpolation Types	Linear (max 64 axis), Arc (2 axis), 3D Arc (3 axis), Helical (3 axis)
Motion Profiles	Trapezoidal, S-Curve, Jerk Ratio, Jerk Limited, Parabolic, Advanced S, Sinusoidal, Trapezoidal Moving Time Average, User specified Acc./Dec. profile
Motion Functions	JOG, Homing, PTP, List Motion, Path Interpolation, Buffered API Execution Mode (Sequential PTP, Trajectory Control), Spline Interpolation (Cubic-Spline, etc.)
Override Functions	Can dynamically change target position (PTP) / velocity (PTP/DVC) and profile parameters during motion
Sync Control	Max. 32 pairs Multiple slave axes and dynamic changing of pairs are supported
Gantry Axis Control	Skew compensation control with a complete synchronization algorithm
Interpolation/ Communication Cycle	Default 1ms. Can be set between 0.25ms - 4ms depending on the system
Position Synchronous Output Function (PSO)	Using PSO function of original PSO module (EtherCAT), a rapid PSO is realized for inspection machines and laser cutter machines
Robot Control Functions	Multiple robots of 6-axis articulated, SCARA, parallel, etc., can be simultaneously controlled up to 64 axes. Synchronizes and interpolates general motion axes and robot arms
Command Modes	Position, Velocity, Torque
Other Motion Functions	Compensation (pitch error, backlash, straightness compensation), soft-landing
I/O Control Functions	11,600 inputs/11,600 outputs. Supports most commercial EtherCAT I/O modules
Event Functions	Motion command execution based on axis position and input events, etc. Event output to windows
EtherCAT Master Functions	CoE, FoE, DC Sync Supported, Line/Star/Ring Topology, HotConnect, ColdConnect
API Supported Language	C Language (C/C++), .NET Framework (C#, VB)
Operating Environment	Windows 7 (x86, x64) Windows Embedded Standard 7 (x86, x64)
Development Environment	Visual Studio (C/C++) x86: 2008/2010/2012, x64: 2010/2012 Microsoft .NET Framework 2.0 and above