# Gold Lion

## Motion Controllers for Harsh Environments

## -40°C to+70°C, Vibrations up to 14GRMS



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| Elmo’s Gold LION family consists of advanced network based, multi-axis machine motion controllers designed to withstand harsh [environmental conditions](http://www.elmomc.com/standards/environmental-conditions.htm) Gold LION controllers can command over any multi axis scenario. From simple Point-To-Point, to complete multi-axis coordinated / synchronized motion.The GOLD LION series comes in two forms: * Rugged, Stand Alone, Ready To Use metal package
* “Ready-To-Use” module that allows for a high-level of customization by embedding the unit on a PCB. This highly advanced motion control solution, with tremendous design flexibility and functionality allows significant space savings.

Elmo’s GOLD LION multi axis controller is perfect for ruggedized applications operating in extreme and harsh environments requiring maximum performance. Suitable for applications such as unmanned robots, azimuth- elevation systems, inertial stabilization systems, gun fire/radars turret stabilizations, gimbals, radar tracking systems, ground based vehicle leveling, etc.HS8ClipImage_56b1fb55*Missiles Launcher controlled by G-LION and 5X G-EAGLE 100A/ 800V servo drives*Complete integration of the Gold Lion with Elmo’s advanced servo drives is extremely fast and simple, making it one of the best performing, highest reliability multi axis systems in the market. The GOLD LION high speed Compliant EtherCAT network is fast, deterministic with high communication reliability, and superior telemetry capabilities that are essential in Military solutions. The fast-real time deterministic operation of the GOLD LION over the EtherCAT network perfectly harmonizes with Elmo’s ExtrIQ servo drives within the system. Multi axis coordinated motion and system telemetry, on top of the highest servo control for fast and precise operation, all result in system performance levels never seen before.The wide variety of standardized and proprietary communication protocols between the GOLD LION Motion Controller and Host computer, PLC, or HMI enables fast and simple communications with 3rd party elements such as touch panels, teach pendant, PLCs, Computers etc., using standard “by the book” industry protocols. Host communication capabilities such as Ethernet, TCP/IP, and UDP Fast Binary Protocols Modbus and Ethernet/IP, allow simple and fast communication with almost any high level Host in the system.The GOLD LION enables rich, high-level, multi-axis programming in environments such as Microsoft .NET, IEC 61131-3 PLCopen, Native C/C++ programming using the PLCopen for Motion and Win32 C/C++. Elmo supplies an enhanced Use of intelligent, simple to use Elmo Motion Block Libraries (EMBLs), machine templates, function, capabilities and libraries to operate under those environments. The EMBLs are complementary to the EASII (Elmo application Studio), a single tool that does it all - Configuration, Set-Up, Networking, Programming, Tuning, Load Identification, Multi-dimensional Control Optimization, Synchronization, Motion Blending and Transitions, Error mapping, ECAM, Gain Scheduling, Templates, Libraries, Scripts, Functions, Testing, Monitoring, Recording.Elmo developed numerous EMBLs to simplify machine development process. For example, Homing (all DS-402 methods and more), Output Compare (PEGS), Emulation, ECAM, PVT, Splines, Joystick etc. Elmo’s Philosophy is “Intelligence By Simplicity”, by applying ready to use motion function blocks and advanced tools to significantly simplify the development process of the application rapidly.

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| The Ultimate Network Motion Controller:* System Kinematics Support
* Motion blending and superimposed motion
* Coordinated group motion, blending and transitions
* Polynomial motion segments, PVT and Spline support
* EtherCAT master for distributed networking, with distributed clock management
* Host communications and protocols:
* Ethernet, TCP/IP, UDP (Fast Binary Protocols, Modbus, Ethernet/ IP)
* USB 2.0
* Rich, high-level, multi-axis programming environment:
	+ Microsoft .NET
	+ IEC 61131-3, PLCopen
	+ Native C/C++ programming using the PLCopen for Motion
	+ Win32 C/C++
	+ Network statistics for diagnostics
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