Maestro™ 3000 Integrated Controller

Bringing the power of networking to laser marking
Lanmark® Controls’ Maestro 3000 Series Integrated Control Box is a turnkey controller solution for galvanometer-based laser marking systems. The Maestro 3000 combines the LEC-1 scan controller, a power supply, and interface hardware (laser extension and I/O boards) into a slim, 1U rack-mountable enclosure.

Designed for laser marking OEMs and end users, the Maestro 3000 controller-in-a-box offers customers the best of both worlds – optimized, high performance laser marking control and fast and easy installation. Simply connect a cable, load the WinLase® LAN Software on your PC (purchased separately), and you are ready to go.

Behind Maestro’s simple user interface is the LEC-1, Lanmark’s next generation Ethernet-based “smart” controller, a networked device that controls multiple laser systems, providing customers with lower PC costs, flexible equipment location, and simple laser management.

Key Benefits
- Fast and easy installation
- Fully networkable
- Simplified management for multiple laser environments
- Flexible architecture (modes, configurations, laser types)
- Industry leading performance
- Highest marking quality
- Improved user productivity
- Eliminates need for PC on production floor

Key Hardware Features
- Slim 1U rack-mountable enclosure
- Based on the LEC-1 next generation Ethernet-based “smart” controller
- Supports most popular laser types including SPI G3 and IPG fiber lasers with general purpose laser extension options.
- Supports XY/2-100 scan head interface
- Provides remote access, control, and monitoring

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The Maestro Solution
The Lanmark Controls’ Maestro simplifies laser systems integration, is fully networkable, and provides all the flexibility and functionality of the LEC-1 Embedded Scan Controller and WinLase LAN laser marking software. The Maestro 3000 controls the most popular lasers and scan heads on the market allowing the integrator the freedom to choose the best components for their application.

Features
- Plug and play simplicity
- Communicates over LAN (local area network), RS 232, TC PIP
- Full Stand Alone capabilities (operates without a PC)
- Offers two way communication directly to a PLC
- Communicate to several laser marking systems from one PC over LAN
- Frequency range of 20 Hz – 5 MHz
- Proprietary software and hardware design
- Interfaces to all XY/2-100 scan heads
- Laser extension option monitors laser error signals
- Full customer service

Benefits
- Allows quick and easy integration of a laser marking system using standard cables provided by the laser and scanhead manufacturers
- No chance for intermittent connections common to a USB interface
- Eliminates PC on production floor
- Tighter process control with real time feedback from laser system
- Streamline production communication
- Realizes full laser frequency control providing unique application solutions
- Full control of the product for new features and development
- CT, GS, ScanLab, RayLase, Nutfield, Sunny
- Tighter control of production with real time feedback of laser error status
- Minimizes downtime
Power Supply
+/- 15 VDC, +5 VDC
85 watts

OEM Interface module
Providing access to I/O and communication signals

LED Indicators:
Power, System Ready, Ready to Mark, Busy, Interlock, Laser

LEC-1
Industry leading LEC-1 embedded scan controller

Laser Extension Board
Providing easy integration to specific laser types

Laser Controller Cable
Scanhead Power
XY2-100 Cable
Cat 5 Cable
AC Input Power

Laser
Scanhead
LAN
A. Laser Extension Board – provides access to laser signals
B. VGA Connector D-Sub – provides access to VGA signals
C. Scan head Power, D-Sub female – used for powering scan heads
D. User I/O, D-Sub male – provides access to user programmable I/O and the Mark-On-The-Fly encoder signals
E. XY/2-100, D-Sub female – provides access to the XY/2-100 signals
F. COM 2, D-Sub male – provides access to the COM 2 port
G. COM 1, D-Sub male – provides access to the COM 1 port
H. Ethernet, RJ-45 – provides access to Ethernet signals
I. USB – provides access to the USB0 and USB1 host ports
J. Input Power – The input voltage specification is 90 – 240 VAC, 50 – 60 Hz with maximum power consumption of 150 watts

Product Specifications
- Controls popular laser types, including IPG Type B fiber and SPI G3 fiber
- Supports XY/2-100 scan head interface
- 1U 19-inch rack mount or desktop enclosure
- One 10/100 Ethernet LAN
- Two USB ports
- 2 RS-232 (COM) ports
- Digital I/O ports
- Scan head power
- Optional VGA for monitor
- Laser extension board output for specific laser types
- Front panel LEDs: power, system ready, laser error, interlock error, ready to mark, busy
- Enclosure: Aluminum with white powder coat finish
- Dimensions: (HWS) 4.4cm x 43.5 cm x 27.9 cm (1.75" x 17.13" x 11.0")
- Weight: 2.0 kg (4.5 lbs)

Accessories Included
- WinLase LAN software USB hardlock key
- 19” rack mounting brackets
- Laser extension board specified upon order
- Power cord for local markets be specified upon order
- WinLase Embedded Basic firmware
- Electronic Maestro, WinLase, LEC-1 Manuals
- Electronic WinLase LAN installation

Optional Accessories
- WinLase Embedded Standard firmware, for stand alone operation
- WinLase Embedded Advanced firmware, for Mark-On-The-Fly operation
- WinLase LAN CD
- Printed Maestro, WinLase, LEC-1 Manuals

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