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Data Sheet
August 13, 2026

APPLIED MATERIALS / SEMITOOL / GALIL

Applied Materials / Semitool LT502 Robot Computer Galil

Applied Materials / Semitool LT502 Robot Computer (Galil) The Applied Materials / Semitool LT502 Robot Computer Galil isamotion-control computer used on Semitool wet-process and wafer-handling tools (including LT-210, Paragon, and Raider system class). It integratesaGalil-based motion controller with PC104 expansion for multi-axis robot control. Verified interface features includeaPC104 bus, up to 7-axis control with installed PC104 boards, six 50-pin ribbon cable connectors, and an 820 nm ST fiber-optic port for TX and RX. OEM part numbers include 23858-501 and related Semitool P/Ns such as 900T0099-501 class listings. The Applied Materials / Semitool LT502 Robot Computer Galil isamotion-control computer used on Semitool wet-process and wafer-handling tools (including LT-210, Paragon, and Raider system class). It integratesaGalil-based motion controller with PC104 expansion for multi-axis robot control. Verified interface features includeaPC104 bus, up to 7-axis control with installed PC104 boards, six 50-pin ribbon cable connectors, and an 820 nm ST fiber-optic port for TX and RX. OEM part numbers include 23858-501 and related Semitool P/Ns such as 900T0099-501 class listings. Semitool / Applied Materials wafer transport robot control; LT-210 / Paragon / Raider wet-process tool robot computers; multi-axis Galil motion control with PC104 I/O in semiconductor wet benches; spar

MODEL **Applied Materials / Semitool / Galil LT502**	CALIBRATION **Available on request**
CONDITION **Used**	STATUS **In stock**
RFQ / SKU **LT502**	LISTING **https://aumictechlabs.com/products/lt502-2/**

NIST-traceable cal · SAM registered · 30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Applied Materials/Semitool LT502 Robot Computer is a PC104-based motion control system engineered for precision automation in semiconductor manufacturing. Featuring integrated Galil motion control technology, it manages complex robotic operations across multiple axes with high-speed fiber optic communication and extensive I/O connectivity. Technical Specifications Bus Architecture & Connectivity PC104 bus interface for modular expansion 820 nm ST fiber optic port (TX/RX) Six 50-pin ribbon cable connectors Motion Control Up to 7-axis control capability with configured PC104 boards Galil motion control integration Motion Control Features Point-to-point positioning Position tracking Jogging Linear and circular interpolation Contouring Electronic gearing ECAM (Electronic Camming) PID compensation with velocity and acceleration feedforward Multitasking for concurrent program execution Form Factor Card-level controller designed for system integration. Key Features The LT502 leverages Galil's motion control architecture to deliver cost-effective axis management. The PC104 bus provides a standardized platform for adding specialized processing or I/O modules tailored to specific manufacturing tasks. Fiber optic communication at 820 nm enables high-speed, noise-immune data transmission in electromagnetically challenging fab environments. Multiple ribbon cable connectors support direct sensor and actuator integration without external breakout boards. Typical Applications Wafer handling and transport automation Precision robotic positioning in semiconductor processes Multi-axis material handling systems Synchronized motion control in processing equipment Compatibility & Integration The LT502 operates within the PC104 ecosystem, allowing integration with compatible expansion boards to expand axis count and I/O capability. System designers can configure axis control from 1 to 7 axes depending on board composition. The fiber optic interface isolates the controller from ground loops and RF interference common in semiconductor fabs.

Features & description

From manufacturer datasheet

Features

- Galil-based robot motion computer

LT502 Characteristics / Specifications

PARAMETER	VALUE
Model	LT502 / LT-502 / LT 502
Manufacturer	Applied Materials / Semitool
Instrument Type	Robot computer / Galil motion controller
OEM Part Number	23858-501
Related OEM Part	900T0099-501 class (LT 502 Robot Computer listings)
Motion Axes	up to 7-axis with PC104 boards installed
Bus Interface	PC104
Ribbon Connectors	six 50-pin ribbon cable connectors
Fiber Optic Port	820 nm ST fiber TX and RX
Controller Architecture	Galil motion control class
Host Platforms	Semitool LT-210, Paragon, Raider class tools
Product Family Aliases	23858; LT502; LT-502; LT 502
Function	Wafer transport / robot motion computer
I/O Style	Parallel ribbon plus fiber serial/optical link class
Form	Tool-mounted robot computer module
Industry	Semiconductor wet chemical processing equipment
Acquisition Context	Semitool acquired by Applied Materials (2009)
Typical Use	Robot axis control and tool communication Notes Public numeric electrical tables beyond Artisan/ClassOne interface descriptions are sparse. Confirm exact PC104 population, Galil firmware revision, fiber link mating, and tool software revision for the installed LT502. Do not invent current/voltage ratings without the tool manual for that revision.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications

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Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

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