

# Product Release Notice

# LaserCAT 2.1.4.5139

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## General Availability Release Date

June 4, 2023

### **Product Overview**

LaserCAT 2.1.4.5139 is the latest release of E-CAT CNC machining product portfolio. E-CAT CNC is a joint venture of Newfangled Solutions, the market leader in PC-based CNC machine control and IntervalZero's market-leading hard real-time. LaserCAT is a machine controller specifically designed to address the machining requirements for fiber and CO2 laser cutting.

Importantly, LaserCAT is a software-only product that executes on an Industrial Windows PC.

Running on a PC offers unmatched flexibility to address the needs of the market versus black-box, FPGA based controllers.

To see a full list of all features and a detailed list of APIs, supported languages and functionality, please refer visit [www.ECATCNC.com](http://www.ECATCNC.com).

### **Key Features**

In today's fast-paced manufacturing landscape, CNC machine builders are under mounting pressure to meet the evolving demands of their customers. These demands include the ability to produce smaller components, cut harder materials with precision and efficiency, achieve higher dimensional accuracy, support advanced geometries, and enable multi-operations within a single machine. Recognizing these challenges, LaserCAT has been designed to offer the most open, PC-based, and affordable solution available.

LaserCAT stands at the forefront of innovation, providing CNC machine builders with a powerful tool to meet the industry's evolving requirements. By leveraging the latest advancements in laser technology, this cutting-edge machining center enables manufacturers to produce smaller, more intricate components while maintaining exceptional quality and weight standards.

LaserCAT's unmatched precision allows for the cutting of harder materials, expanding the range of possibilities for CNC machine builders.

### **Dimensional Accuracy**

Dimensional accuracy is paramount in the CNC industry, and LaserCAT sets a new standard in this regard. With its advanced design and state-of-the-art engineering, LaserCAT ensures unparalleled precision, providing CNC machine builders with the confidence to deliver products of superior quality to their customers.

### **Advanced geometries**

Advanced geometries are becoming increasingly prevalent in modern manufacturing. LaserCAT empowers CNC machine builders to work on parts rather than being limited to flat steel, enabling them to explore new design possibilities and create complex components with ease. This versatility opens up a world of opportunities, propelling manufacturers to new heights of innovation and creativity.

### **Multi Operations Support**

LaserCAT's unique architecture supports multi-operations within a single machine, streamlining production processes and reducing costs. This capability significantly enhances productivity, efficiency, and overall profitability for CNC machine builders, giving them a competitive edge in the market.

### **Customizability and Flexibility**

One of the standout features of LaserCAT is its customizability and affordability. Despite its cutting-edge technology and advanced capabilities, E-CAT CNC has ensured that LaserCAT remains accessible to a wide range of CNC machine builders. The open, PC-based nature of the system also enables easy integration and customization, allowing manufacturers to tailor LaserCAT to their specific requirements. This serves as a major contrast to black-box controllers that offer a certain set of features and are unable to accommodate functionality beyond that set.

## **Feature List**

### **Automation Integration**

- Laser Integrated with other CNC machines Feeder / Loader Operation
- Auto Gas Control
- Vision (Fiducial Recognition)
- Consumables Tracking

### **Shape and Graphics**

- Shape Importing Utility
- Shape Library
- Trace Parts (Teach)
- Part Nesting
- Serial Number & Font Etching/Engraving

### **Gcode optimized for laser power & material**

- Convert Plasma Gcode to Laser
- Built in Material Cutting Tables Pierce & Etching Tables
- Use any CAD/CAM system

### **HMI / Screen fully Customizable**

- Build screen elements and controls Private labeled, Logo, and Images Customizing on the fly without compiling Operator Panel Builder Utility

### **Use Different Brand Components**

- Ethercat, Ethernet, Modbus, USB, Serial
- Add peripherals
- Custom Hardware

### **Standard Laser Features**

- Auto Focus Control
- Capacitance Laser Head Control Edge Detection & Plate Alignment Anti-Dive
- Tip Touch Safety System
- Laser Align (Shutter)
- Dry Run
- Retract & Restart
- Cut from Here
- Full Fixture and Offset control

### **IOT & Database Integration**

- Remote Communication with Phones & Tablets
- Database Connectivity
- Bar Code Scanners
- Read BOM's and Part Scheduling
- Part Numbering, Order ID, Batch #, engraving/record keeping and More....

## Summary

LaserCAT provides the only truly open, low-cost, PC-based laser-cutting CNC solution that is able to machine smaller parts for miniaturization, to cut harder materials for quality and weight, to deliver higher dimensional accuracy, to support advanced geometries to work on parts rather than on flat steel, and to enable multi-operations in a single machine. Additionally, being PC-based delivers unsurpassed customizability to allow the customer to perform operations not available in a black-box controller.



## About E-CAT CNC

ArtSoft, a leader in the CNC industry, and IntervalZero, a leader in RTOS solutions, joined forces to create a groundbreaking joint venture called E-CAT CNC. This strategic collaboration aims to redefine the CNC machine market by introducing innovative solutions that address the pressing needs of CNC machine builders worldwide. The inaugural product of this partnership, LaserCAT, promises to revolutionize the industry with its unmatched capabilities and affordability.

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