

MONITORING
AUTOMATION
PROCESS CONTROL



SMART MANUFACTURING SOLUTIONS



**SMART
LIGHT**
MACHINE STATUS
INDICATION



D+Tect IT
CNC SENSOR
ANALYSIS



MiCONNECT
STREAMLINED PROCESS
AUTOMATION



TMAC
TOOL WEAR AND
BREAKAGE DETECTION



AUTOCOMP
AUTOMATED TOOL
OFFSET COMPENSATION



**TOOL
CONNECT**
RFID TOOL DATA
MANAGEMENT

ABOUT CARON ENGINEERING

Caron Engineering, Inc. is an aggressive, energetic company where keeping current with today's emerging technologies is not just a business, it's a passion. Caron Engineering develops smart manufacturing technology that interfaces directly with the CNC control to automate and optimize machining processes.

◆ Location

Caron Engineering is located in the Northeastern United States, just a few miles from the coastline in Wells, Maine, USA.



◆ History



In 1986, after working in the CNC machining industry for many years, President Rob Caron, (P.E.), identified a gap in the market when it came to CNC tool monitoring and machine control. He decided to start his own company in the basement of his home to pursue the development of these conceptual technologies. Today, Caron Engineering has more than 35 employees and a dynamic product line of smart manufacturing solutions that are unmatched in the industry.

◆ The People

Caron Engineering boasts some of the finest professionals in the industry. As an employee-owned company (ESOP), they take great pride in recruiting and retaining outstanding talent, as evidenced by their employees' long-term commitment and dedication. Every CEI team member consistently goes above and beyond to ensure an exceptional customer experience.



◆ Solutions for the Future

Caron Engineering stands at the forefront of tool monitoring, automation, and process control systems for manufacturing. Their expanding range of smart technology products leverages high-precision sensors and advanced monitoring capabilities to shorten cycle times, enable unattended operations, reduce human error, lower tooling costs, and prevent costly damage to machines and work-holding. These solutions support fully automated or minimally attended production and integrate seamlessly with other manufacturing and supervisory systems for comprehensive control of your entire manufacturing environment.



We provide service to a wide range of industries.



SMART MANUFACTURING TECHNOLOGY



Automation Software for CNC Machining Operations

- Connects devices and operations on a shop floor without the need for custom coding
- Automates and simplifies manufacturing processes
- Guides and verifies operator interaction for total process control
- The pre-built devices and programming registers allow for seamless data-interchange across the software platform



- Measures tool wear in real-time using high-resolution sensor data and a dedicated high-speed data processing unit
- Prevents tool breakage, maximizes tool life, and lowers scrap rate
- Makes real-time, automatic corrective adjustments through variations in material, tooling, and depth of cut
- Optimizes cycle time; typical cycle time savings up to 60%
- Monitors multiple processes and sensor channels simultaneously

Tool Monitoring Adaptive Control

Access TMAC anytime, anywhere, and from any network connected device, with the new browser-based user-interface!



Tool Data Management System

- Automates the transfer of tool presetter data to the machine control
- Reduces setup time and eliminates human error
- Each system is completely customizable to be configured for an existing tool ID format or any custom designed format



CNC Sensor Analysis System

- Detects machine irregularities using sensors for vibration, strain, power, and analog (for connecting any sensor with a 0 to ± 10 VDC analog signal)
- Runs standalone or integrates with the CNC control
- Has numerous analysis options to simultaneously monitor and scrutinize sensor data

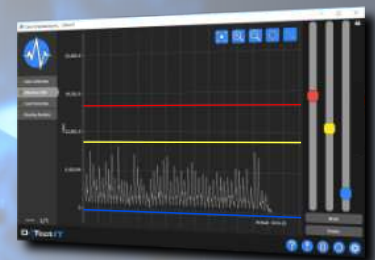
Monitoring Modes

Limit Analysis

Bearing Analysis

Fault Detection

Frequency Analysis



Automated Tool Wear Compensation Software

- Processes gauge data from almost any electronic gauging device
- Automatically updates tool offsets to the CNC control
- Eliminates operator data entry errors, and notifies the operator when a tool change is needed

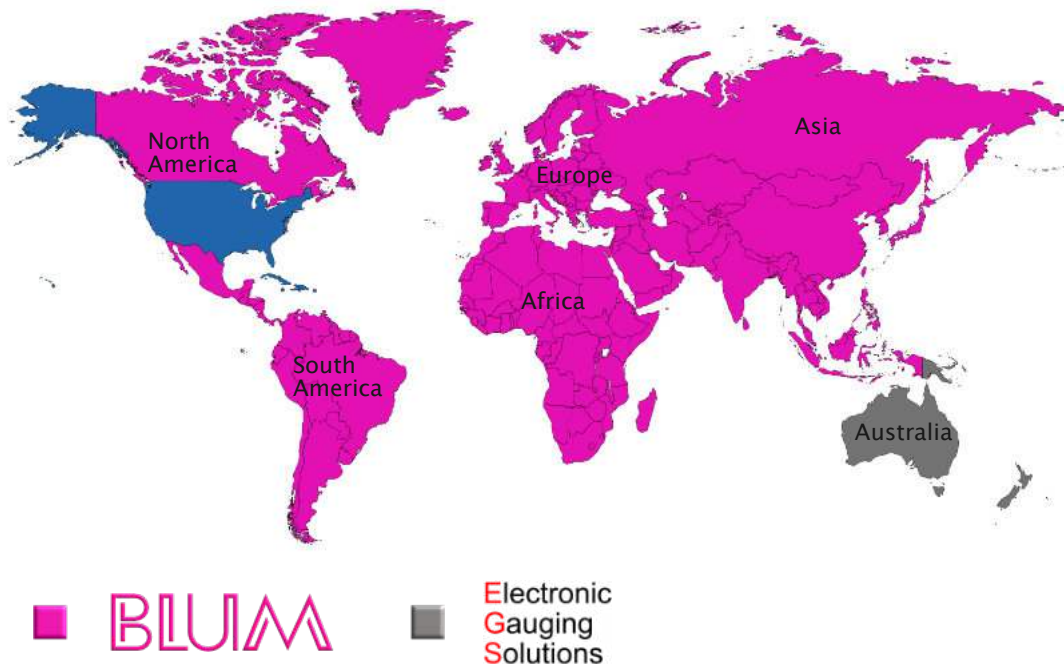


Customizable CNC Machine Status System

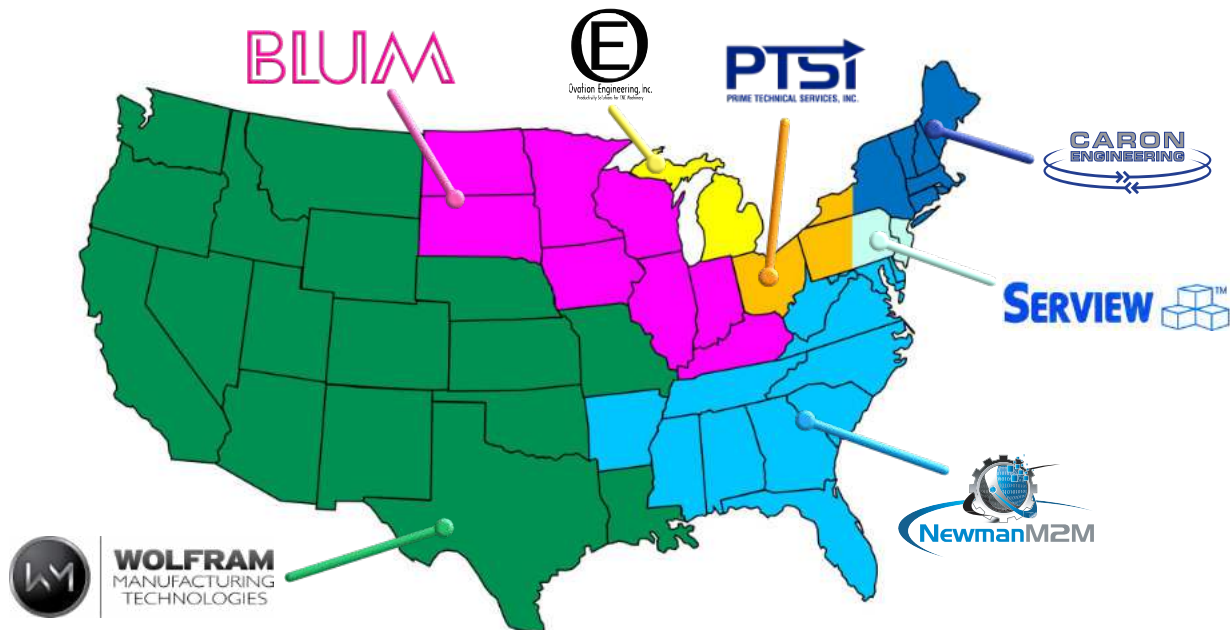
- Can be programmed for any machine status or condition indication
- 1000 available modes, audible alarm, six (6) standard color options, plus one (1) user defined color



WORLDWIDE REPRESENTATION



UNITED STATES SYSTEMS INTEGRATORS



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MADE IN THE U.S.A.

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