

SMART MANUFACTURING SOLUTIONS



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 optimize machining processes. These solutions focus on unattended operations, machine health and process diagnostics, tool wear and breakage detection, automatic tool offsetting, cycle time reduction, and eliminating operator error.

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 employs some of the best people in the business. As an employee-owned company (ESOP), they take pride in finding and maintaining exceptional employees which is consistently proven by their longevity and dedication to the company. Each and every CEI employee goes above and beyond to ensure the best customer experience.



Industry 4.0

Caron Engineering's process control solutions provide valuable information about the cutting process and health of the machine. The IIoT enabled sensors and monitoring systems collect real-time data and provide advanced analysis of both machine cutting as well as machine mechanics. All systems have custom drivers for seamless communication with shop floor automation software. With Caron Engineering's product line of solutions, creating a "Smart Factory" has never been easier.

Providing service to a wide range of industries...



All CEI products are **MTConnect** compliant



SMART MANUFACTURING TECHNOLOGY

TMAC

- Measures tool wear in real-time using high-resolution sensor data and a dedicated high-speed data processing unit
- Prevents tool breakage 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 of 20-60%
- Lowers the cost of consumable tooling
- 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 CONNECT

Tool Data Management System

- Automates the transfer of tool presetter data to the machine control, using RFID tags in tool holders or 2D presetter printed barcodes
- 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

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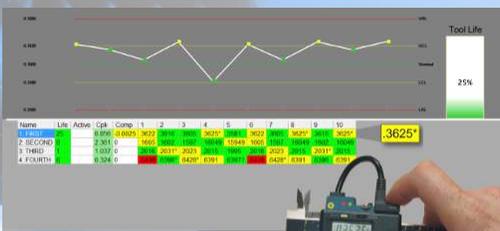
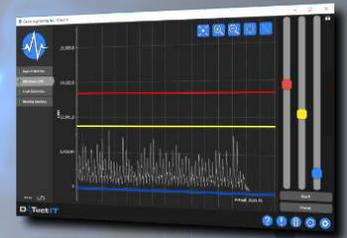
CNC Sensor Analysis System

- 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 that can be used simultaneously to monitor and scrutinize sensor data in various ways
- Easily detects excessive bar feeder vibration (e.g. bent bar)



Monitoring Modes

- Limit Analysis
- Bearing Analysis
- Fault Detection
- Frequency Analysis



AUTOCOMP

Error-Free Tool Offset Control

- 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

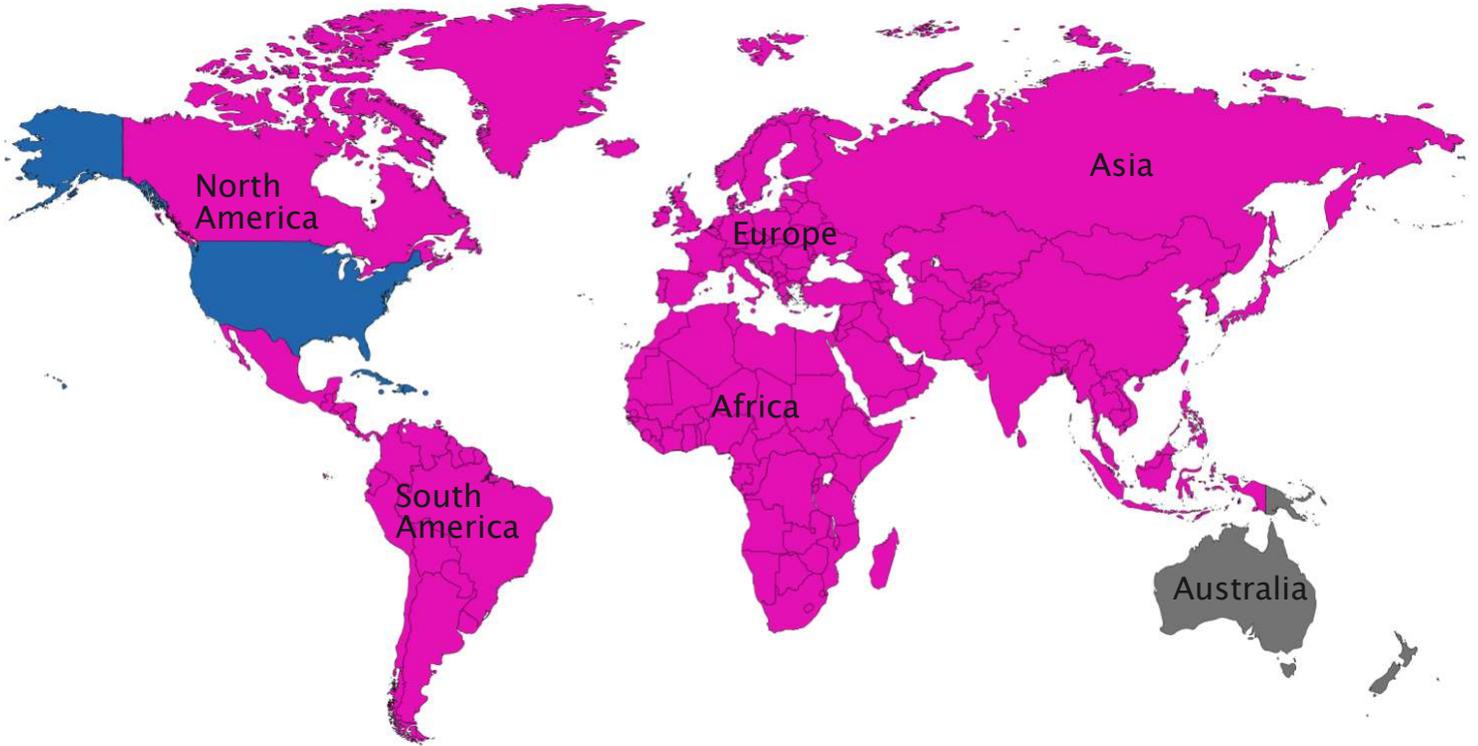
SMART LIGHT

Machine Status Indication

- Provides easy assessment of a part's progress on a CNC program
- 1000 available modes, audible alarm, six (6) standard color options, plus one (1) user defined color
- User can set indicators for any machine status or condition



WORLDWIDE REPRESENTATION



United States Integrators



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MADE IN THE U.S.A.