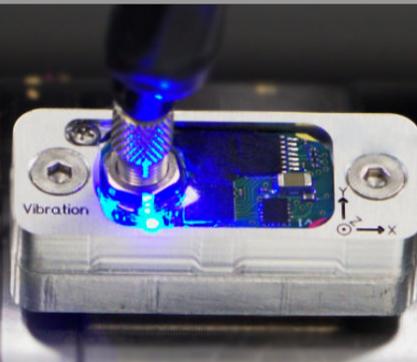


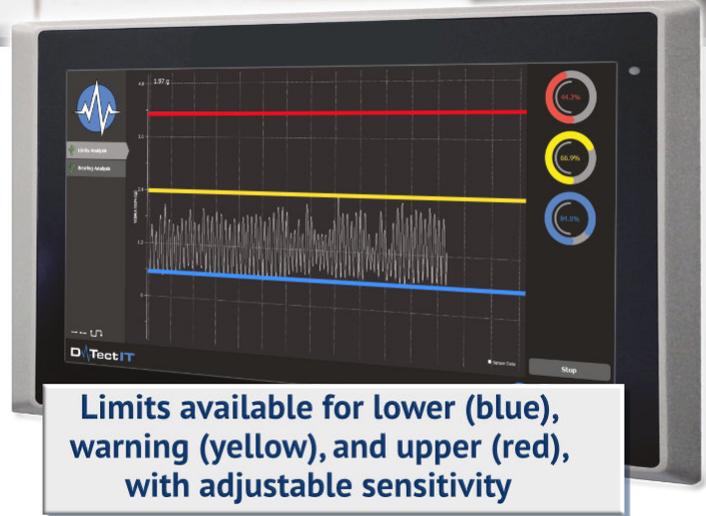
# MONITOR ANY AREA OF CONCERN ON YOUR CNC MACHINE



## LIMIT ANALYSIS



- Detects machine irregularities
- Uses Caron Engineering USB sensors as input, including vibration, strain, and analog
- Easily detects excessive bar feeder vibration (i.e. bent bar)
- Operates on any Windows PC with an available USB Port
- Runs standalone or easily integrates with the CNC control
- Limits can be latched to ensure alarms are not missed
- Graphing and monitoring can be initialized from the user interface or the CNC control
- All USB sensors detect temperature which can be monitored using set limits
- Built-in audio sensor can record and graph the data from any recognized audio device on the Windows PC



Limits available for lower (blue), warning (yellow), and upper (red), with adjustable sensitivity

## BEARING ANALYSIS



- DTect-IT measures spindle vibration to monitor bearing health for analysis
- Vibration signal is analyzed for the
  - (1) Acceleration signature which tells the health of the bearings,
  - (2) Velocity signature which detects misalignment, imbalance and looseness
- Displays acceleration and velocity results within 5 seconds to show if attention is needed
- Generates and saves reports for analysis



## FAULT DETECTION



- DTect-IT recognizes when set upper and lower limits are exceeded, identifying an excessive condition (i.e. machine impact, overheating, extreme vibration)
- Indicates and time stamps machine faults and records data on either side of the fault for analysis
- Upper and lower limit latching to ensure alarms are not missed
- Optional password requirement on alarm reset or settings adjustment

## DATA COLLECTION ANALYSIS



- Collects raw data from any sensor and stores the data to a CSV or SQLite file for analysis
- Set the number of data points per second to be collected (up to 62,500 points/sec)

[www.caroneng.com](http://www.caroneng.com)

Please visit our website for the most up-to-date information

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## Vibration Sensor Specifications

- Dynamic Range: -800g to +800g
- Frequency Response: 80Hz to 22kHz at 64ksps
- Temperature Sensor: -40 to 100°C NTC thermistor
- 40mm x 16mm (1.575x0.623 inch) including the anodized aluminum case



## Strain Sensor Specifications

- Capability depends on mounting characteristics



## Analog Sensor Specifications

- 4 channel inputs
- 0-10 VDC analog signals
- 4 - 20 mA current signals
- Allows monitoring with power, pressure, coolant flow, etc.



## Audio Sensor Specifications

- Records from any recognized audio device on the DTect-IT Windows PC

## Operating System Requirements

- Windows XP, 7, 8, 10

## Compatible Controls

- Fanuc
- Mitsubishi
- Citizen
- Okuma
- Siemens

## Stored Data Format

- CSV
- SQLite

## Physical I/O

- Ontrak

**MTConnect** Compliant

## OTHER PRODUCTS FROM CARON ENGINEERING:



Reduce cycle time and maximize tool life with **Tool Monitoring Adaptive Control**.



Eliminate operator data-entry errors with automatic tool wear compensation software



Automatically transfer tool presetter data from RFID tags in tool holders to the machine control



Replace your existing status light; 1000 available modes and programmable audible alarm



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