

eZ-TOMAS & eZ-TOMAS Remote

Rotating Machine Monitoring & Analysis Software

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eZ-TOMAS Features

- Rotating Machinery Analysis: Time Waveform, Orbit, Spectrum, Waterfall, Polar, Bode, Shaft Center Line, and Trend displays
- Transient and Steady State rotating machinery analysis
- Easy-to-use graphical user interface and multiple project configurations provide fast setup
- Up to 20 kHz Analysis Frequency, with up to 25,600 lines of resolution
- Supports up to 56 channels
- Overall, spectral amplitude, and phase gauges with peak hold indicators
- Spectral limit checking, with output relays and alarm event logging
- Limit sets for specific RPM ranges
- Event data storage based on user defined triggers, with automatic backup
- Machine and Bearing Fault analysis and limit checking
- Save/Recall display setups with up to 8 display windows, and multiple overlays
- Integration and differentiation for acceleration, velocity, and displacement inputs
- Harmonic, Sideband, and Peak cursors for time waveform and spectrum displays
- Statistical analysis report with automatic limit generation
- Generate production test cell reports
- Export data to Excel®, UFF Type 58 Binary, or ASCII format
- Supported Operating Systems: Windows 2000®, Windows Vista® x86 (32-bit), and Windows XP®

eZ-TOMAS Remote Features

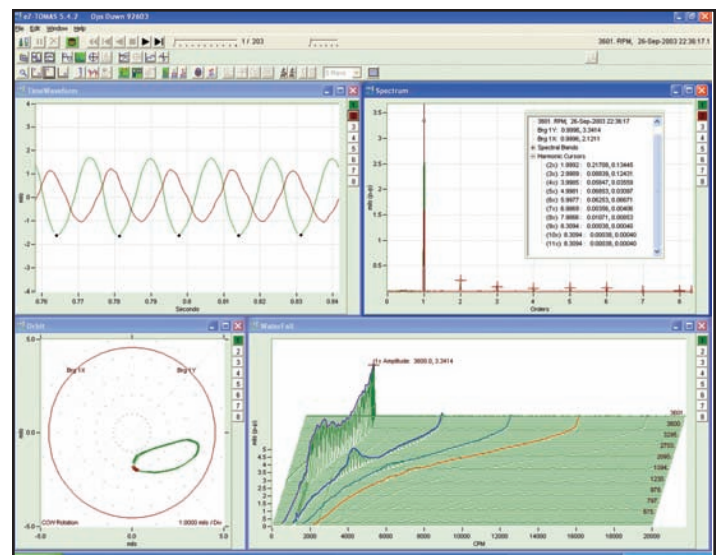
- Provides remote monitoring, analysis, and control of multiple eZ-TOMAS systems
- Remote Real Time and Historical Spectral Analysis and Displays
- Configurable real-time Gauge Displays
- Multiple eZ-TOMAS Remote users can simultaneously monitor an eZ-TOMAS system

eZ-TOMAS is a highly sophisticated, yet easy-to-use tool for the monitoring and analysis of single or multiple machines, which allows the user to assess the reliability and operation of his process, and the critical machines pertaining to his process. Notification of faults are displayed locally, but can also be sent via text message or email, allowing the user to be notified of any problem regardless of his location.

eZ-TOMAS has built in an extensive set of data displays, allowing the user to view data in a variety of formats, and virtually eliminate any potential for errors in the diagnoses of potential problems.



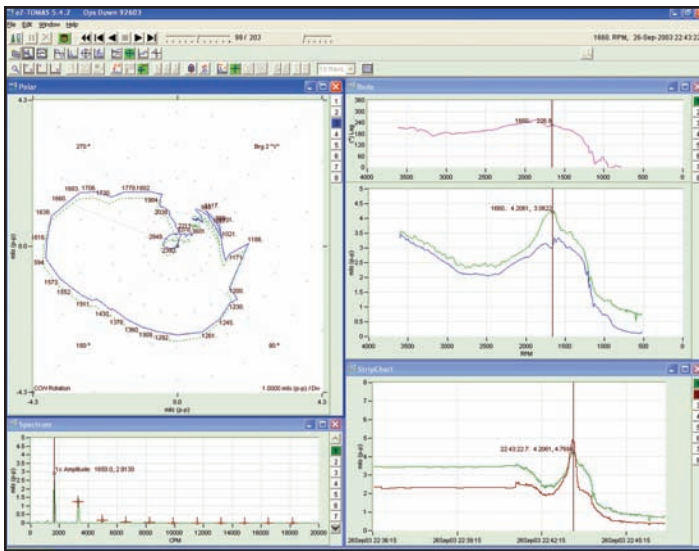
View Time-Domain, Spectrum, Waterfall, and Trend simultaneously on one screen with eZ-TOMAS



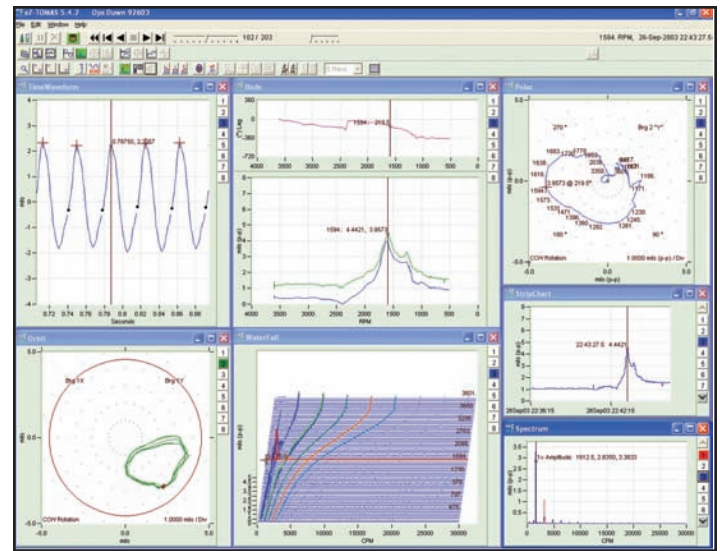
Machine Shutdown Transient is captured and analyzed

eZ-TOMAS & eZ-TOMAS Remote

General Information



Polar, Trend, and Spectral Displays provide rotating machinery analysis



Up to eight display windows with overlays for each window

Continuous Monitoring. eZ-TOMAS automatically stores data based on time or change in machine condition such as speed, vibration level, and alarm condition. A circular FIFO file, with automatic backup, records the data. If an alarm condition occurs, eZ-TOMAS can automatically notify you.

Analysis Tool for Rotating Machine. You can display and analyze historical data while eZ-TOMAS continues to collect, monitor, and store data. Displays include Waterfall, Spectrum, Bode, Polar, Orbit, Time Waveform, Shaft Center Line, and Trend displays.

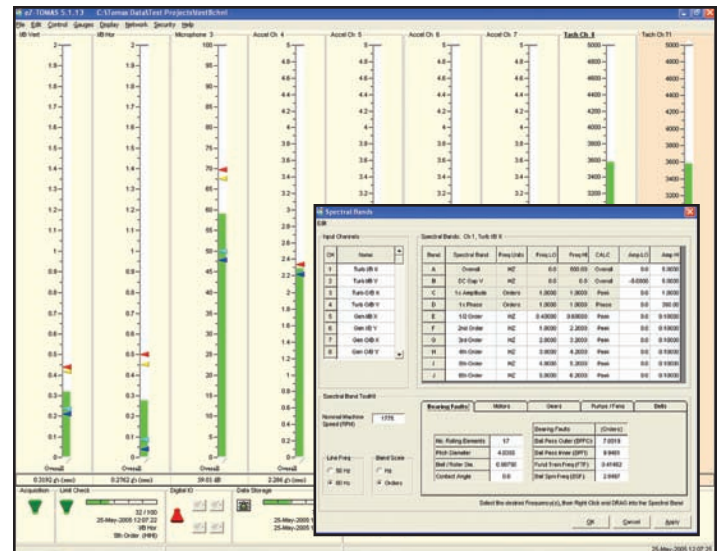
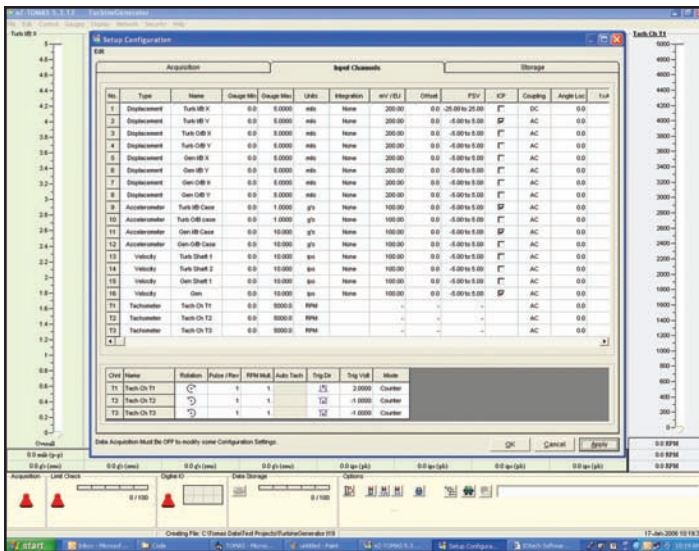
Portability. The ZonicBook or 600 Series, and notebook PC running eZ-TOMAS, can be easily moved from machine to machine with very short setup times. Use it to reduce downtime, improve data collection, and troubleshoot problems, while maximizing inventory utilization by intelligently projecting down time for parts replacement. With minimal training, you can set up eZ-TOMAS, start monitoring, perform data reduction, and prepare reports all in the same day.

Acquisition

- **Hardware:** ZonicBook/618E, 600 Series, or WaveBook/516E
- **Analysis Range:** From DC up to 50 kHz
- Up to 25,600 spectral lines for high resolution
- **Channel Coupling:** AC, AC with IEPE, or DC
- **Channel Input Range:** From 25 mV to 25V
- **Windowing:** Hanning, Flat Top, Blackman Harris
- **Multiple Tachs:** Up to 32 dedicated tach channels for phase reference
- **Input Channel Types:** Displacement, Velocity, Acceleration, Pressure, Tachometer, and other sensors
- Input channels can be order normalized to any tachometer input
- **Averaging:** Peak Hold, Linear, or None

eZ-TOMAS & eZ-TOMAS Remote

General Information



Easy configuration of all channels

Limit checks on up to 10 user defined and 4 dedicated parameters for each channel

Storage

- Event driven FIFO circular files change in Time, RPM, Vibration levels, or Alarm Condition
- **User Defined FIFO Size:** Up to 225,000 time waveform records per input channel
- View or Export historical data while monitoring is active
- Automatic backup of FIFO file

Data is stored in a FIFO file based on a change in machine condition or absolute time. Examples of machine condition include RPM, vibration level, and alarm status. A User Snapshot feature provides the ability to manually trigger data storage. You can also specify that eZ-TOMAS only store data while the machine is operating within machine speed range. These features allow you to record the vibration condition of your critical machine, and quickly review that information.

Limit Checking

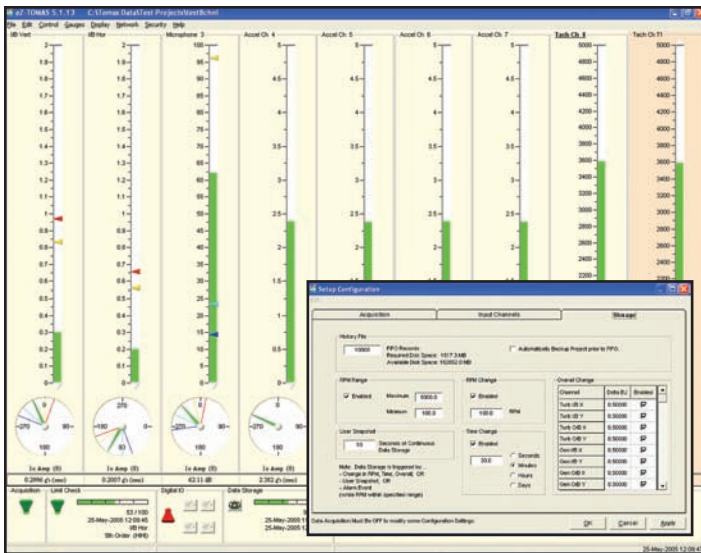
- Two High and two Low alarm Set Points can be defined for multiple RPM ranges
- Set Points can be entered manually, or generated automatically based on historical operating conditions
- Spectral Set Points can be specified for Machine and Bearing Fault frequencies
- Alarm Event Recognition can be delayed to reduce false alarms
- Alarm Events are logged with Date/Time stamps
- Email and Text Messaging can be sent on Alarm Event
- Output relays can be triggered on Alarm Events

eZ-TOMAS continuously limit checks the acquired data. If the vibration level exceeds a limit set point, the event and vibration level is recorded in the Alarm Log. The vibration data surrounding the alarm event is also stored in the FIFO file.

Like all other eZ-TOMAS features, Limit Checking is user configurable. Two (2) High and two (2) Low limits can be defined for each spectral band. You can use the Statistical Report feature to automatically generate limits based on the historical operation of your machine. This method can be a powerful tool in quickly determining machine health changes.

eZ-TOMAS & eZ-TOMAS Remote

General Information



Unparalleled event capture parameters are easily configured

Rotating Machine Displays & Reports

- Gauge displays with status indication and peak hold indicators
- Vertical gauges for overall and spectral amplitude
- Circular gauges for spectral phase
- Up to 8 plot windows, with up to 8 overlays per window
- **Display Formats:** Spectrum, Waterfall, Time, Orbit, Polar, Bode, Trend, and Shaft Center Line (SCL)
- Order normalization and order tracking
- Harmonic, Sideband, and Peak Cursors on Time Waveform and Spectrum displays
- Statistical reports with minimum, average, maximum, and deviation calculations
- Runout compensation for Polar and Bode displays
- Integration and Differentiation of acceleration, velocity, or displacement inputs
- Baseline and Limit overlays
- Bearing clearance circle overlay for Orbit and SCL displays
- Save and Recall your preferred data displays
- Production test cell reporting using Microsoft® Excel®

The gauge displays allow you to quickly determine the real-time vibration levels and status of your rotating machine. The Peak Hold indicators show maximum excursions for all spectral bands.

Simply double click on a gauge to open a display window. You can then analyze vibration condition using real-time and/or Historical data. Predefined plot setups allow you to streamline the reporting process.

eZ-TOMAS Specifications

Acquisition Features

- Data collected from displacement, velocity, accelerometers, tachometers, and process probes
- Vibration data is referenced to up to eight tachs
- AC or DC coupled
- User-defined spectral bands (peak, overall, or phase values in a user-defined spectral band recorded over time)

Processing Characteristics

Analysis Frequency: From DC up to 50 kHz, all input channels synchronously sampled at the analysis rate times the Nyquist factor

Spectral Resolution: From 200 to 25,600

FFT Windows: None, Hanning, Flat Top, 3 Term Blackman Harris

Integration: Single and double integration

Averaging: Linear, peak hold indicators, or none

Storage Features

- **FIFO Design:** User specified size to 225,000 records per channel
- Storage triggered on change in RPM, time, overall vibration, or alarm
- Storage enabled within an RPM range
- Continuous data storage can be user or alarm triggered
- Automatic backup FIFO file

Limit Checking Features

- Two (2) High and two (2) limit set points per spectral band
- Limit set points can be specific to multiple RPM ranges
- Alarm log records alarm events
- Output relays allow user control when event occurs
- Color status indication is shown on the gauge panels

Display & Report Features

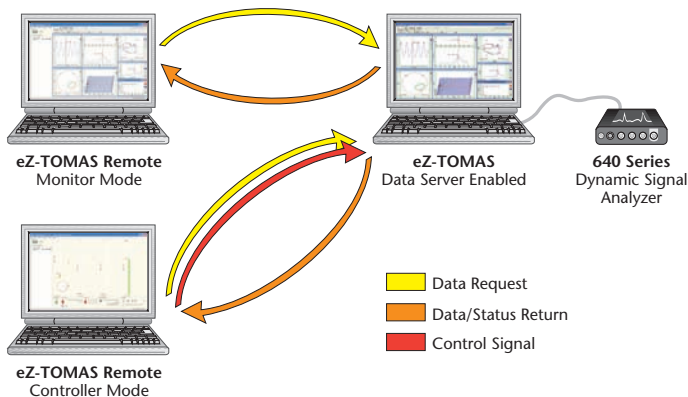
- Gauge displays provide indication of current spectral band information and status
- **Display Formats:** Time, Spectrum, Waterfall, Orbit, Bode, Polar, Trend, and Shaft Center Line
- Integration and differentiation of acceleration, velocity, and displacement inputs
- Up to 8 display windows, each window supports up to 8 traces
- Statistical reports provide minimum, maximum, average, and deviation values
- Plot setups can be saved and recalled
- Baseline and limit set points can be overlaid

eZ-TOMAS & eZ-TOMAS Remote

Specifications & Ordering Information

eZ-TOMAS Remote Overview

eZ-TOMAS Remote software allows you to remotely monitor and/or control eZ-TOMAS applications through client/server architecture. The server, an eZ-TOMAS application, interacts with the hardware, and is typically at a remote location, relative to one or more clients (eZ-TOMAS Remote).



eZ-TOMAS Remote can be used to monitor and/or control multiple eZ-TOMAS applications

eZ-TOMAS Remote, frequently referred to as the client, communicates with eZ-TOMAS via TCP/IP. Several clients can run simultaneously to monitor an eZ-TOMAS application. In addition to monitoring and controlling eZ-TOMAS applications, you can create unique plot setups that are local to eZ-TOMAS Remote. In other words, you can create custom setups that exist only at the client.

A single eZ-TOMAS Remote client can control multiple eZ-TOMAS servers. As indicated in the figure above, when connected to a server, eZ-TOMAS Remote has two modes of operation:

- Monitor mode
- Controller mode

Monitor Mode

Monitor mode allows you to view data from an eZ-TOMAS application. You can view gauges and plots; and the data viewed can be live or historical.

Controller Mode

A client may be enabled as a controller for a server if eZ-TOMAS is configured to permit such control. Control is restricted to a single controller at a time. The controller mode allows you to control every aspect of the acquisition state for an eZ-TOMAS application. While in the controller mode you can:

- Configure an acquisition
- Set Limits
- Configure Digital I/O
- Start and stop acquisitions
- View gauges and plots
- *and more...*

Ordering Information

Description

Rotating machine monitoring and analysis software for 600 Series, ZonicBook/618E, and WaveBook/516E Remote access and control client for eZ-TOMAS Automation module with 8 relay outputs

Part No.

eZ-TOMAS
eZ-TOMAS Remote
NDTRelay2

Note: eZ-TOMAS is included with the ZonicBook/618EZT and ZonicBook/618EZAT packages.

BUY NOW!

For complete product specifications, pricing, and accessory information, call 1-888-714-3272 (U.S. only) or visit iotech.com.