

eZ-Analyst

Real-Time Vibration & Acoustic Analysis Software



Features

- Real-time FFT analysis
- Easy-to-use graphical user interface provides fast setup
- Field expandable from 8 to 56 channels
- Supports four separate tachometer channels
- 3D Color Waterfall Spectrum Display
- Order Normalization and Order Tracked Plots
- Multiple Plot Overlays
- View all functions simultaneously in eight display windows with up to 16 data overlays in each window
- Export your data to Excel, ME Scope, SMS Star, UFF type 58 ASCII or Binary, and RPC III
- Wide selection of real-time analysis features, including integration/differentiation, synchronous averaging, and much more
- Supported Operating Systems: Windows 2000®, Windows Vista® x86 (32-bit), and Windows XP®

eZ-Analyst software from IOtech adds real-time continuous and transient data acquisition in the Time, Frequency, or Order domain to 600 Series, ZonicBook/618E, and WaveBook/516E systems. Today's eZ-Analyst is the compilation of over 10 years of continuous software development and customer inputs that results in the most versatile vibration analyzer available.

eZ-Analyst is operated through a series of easy setup windows that display only the information important to your test. Acquisition configuration involves selection of the desired acquisition parameters from easy-to-use menus.

Configuration

eZ-Analyst features a familiar Windows®-style graphical user interface, making it easy to configure the hardware with simple fill-in-the-blank configuration screens. Selectable hardware parameters include channel selection, channel type (either response or reference), range, auto-ranging, triggering, and more. Configurations can be saved and recalled for future use, making it simple to change from one test to another.

Windowing. eZ-Analyst includes Hanning, Blackman Harris, Flat Top, Exponential with variable decay, and no window for response channels. Additionally, Rectangular and Cosine Taper Windows are provided for reference channels.

Averaging. Linear, Exponential, Peak Hold, and Time Synchronous

Resolution. eZ-Analyst offers resolution from 64 to 25,600 Spectral lines

Frequency Range. From DC up to 100 kHz*

Sample Rate. User selectable from 2.56, 5.12, or 10.24** times the frequency range selected to help in acquiring that elusive transient

Channels. Minimum of 8 to a maximum of 56 in increments of 8

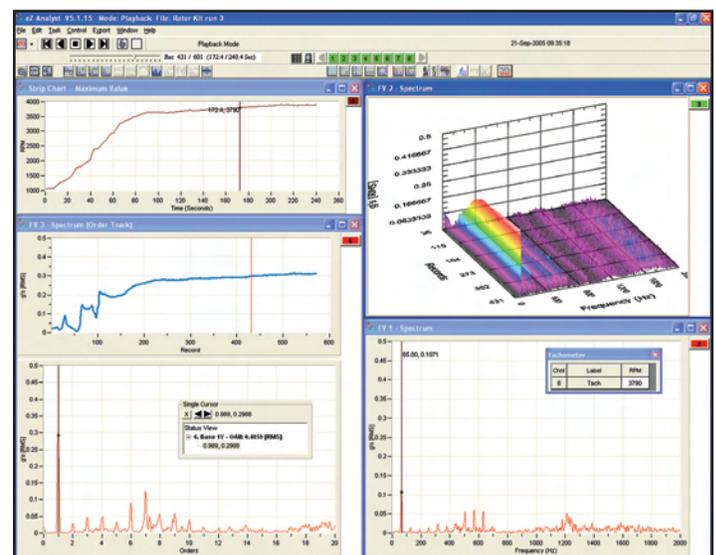


The ZonicBook with eZ-Analyst system is a complete vibration data acquisition and analysis package

Triggering. Any active channel may be used as an acquisition trigger, which is adjustable on level, slope, and pre or post delay as a percentage of the time window

Tachometer. Four independent inputs for RPM measurements

MIMO. Any number of active channels can be set as reference channels making MIMO (Multi Input Multi Output) testing easy and convenient

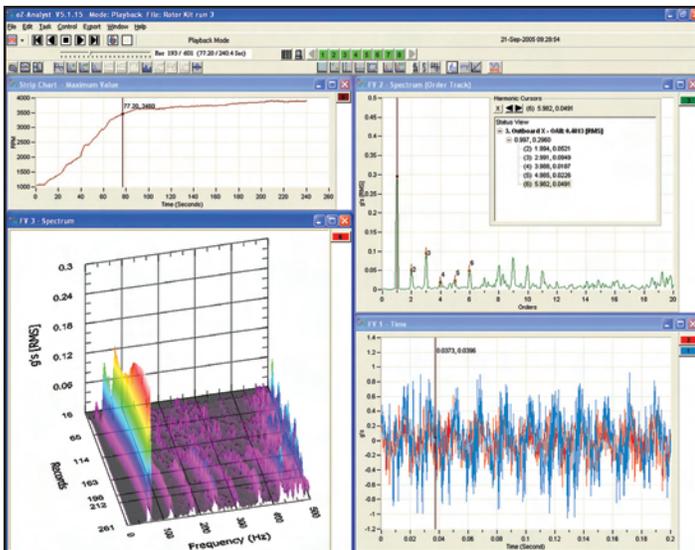


Waterfall, RPM Strip Chart, Frequency Spectrum, Order Normalized Spectrum, and Order Track Strip Charts are all available with complete flexibility during acquisition

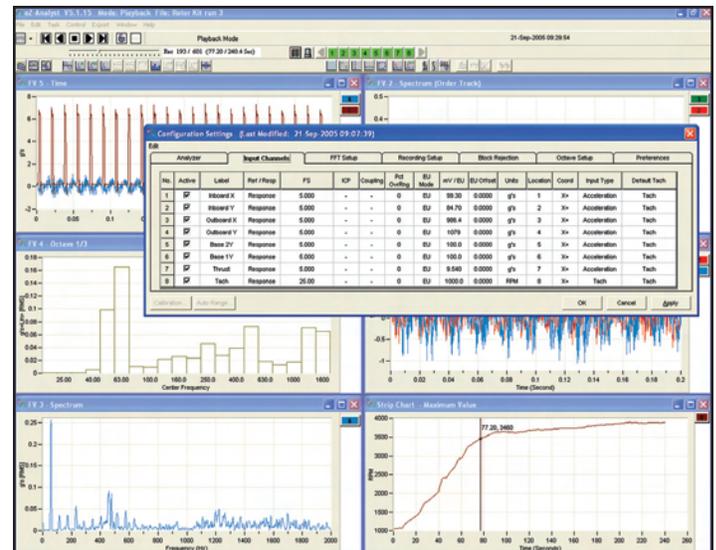
* Maximum bandwidth determined by number of active channels and sample rate
** Sample rates apply to only the ZonicBook

eZ-Analyst

General Information



Complete display flexibility with a MDI style interface



The analyzer's acquisition setups are easily and quickly configured

Display

eZ-Analyst allows the user to establish any combination of displays up to a maximum of 8 separate display windows and 16 data traces within each window for unparalleled versatility. Each display set up can be saved for instant recall providing the user with unlimited display flexibility.

3D Color Waterfall Spectrum Display

eZ-Analyst now includes a powerful 3D Color Waterfall Display to augment its already powerful spectrum display capabilities. Each Spectrum window added to the eZ-Analyst display screen can have its own 3D Waterfall with unique configuration settings. The new eZ-Analyst Waterfall displays include the following capabilities:

- Latitude and Longitude display rotations
- 3D Plot cursor to display the value at a specific X, Y, and Z plot coordinate
- Configurable number of Spectrum records
- Automatic tracking of scale and axis changes made to the Spectrum display
- Spectrum record decimation
- Averaged Spectrum record tracking
- 3D display of Spectrum Single, Dual, Harmonic, Sideband and Free Form cursors
- Highlighted spectrum of current record in playback mode
- Six custom definable 3D plot rotation context menu presets for customized waterfall views
- Individual control of 3D surface plot and cursor trace transparency
- Auto and Log scaling capability
- Choice of three color modes for 3D surface plot

Order Normalized & Tracked Plots

View both Frequency and Order domain information at the same time. The user can specify any combination of orders, up to a maximum of 20 orders per display window while also viewing the order normalized and/or frequency domain plots. This feature may be selected while viewing real-time or post processed data without the restriction of defining your display prior to running your test.

Multiple Plot Overlays

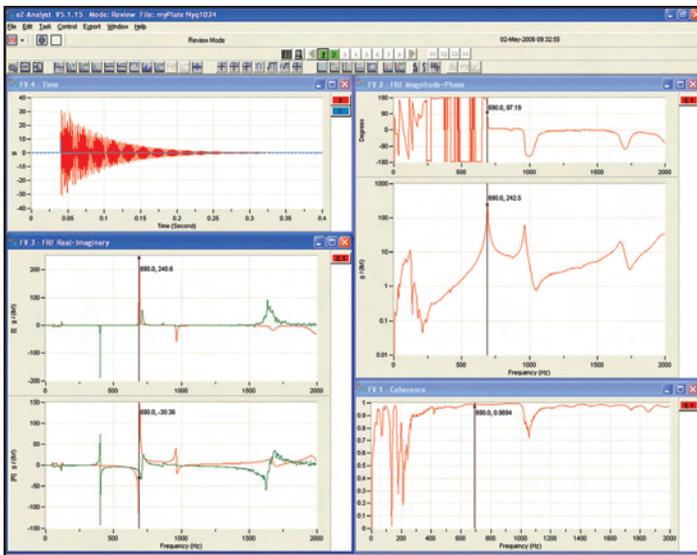
This new feature allows you to quickly compare current test measurements to previously acquired data and expected results. eZ-Analyst can directly import and overlay Microsoft® Excel® data while acquiring current test data in real time. This feature allows setting up test criteria by importing previously acquired or user-generated data into the real-time display plots. Up to 15 separate plot overlays can be imported, allowing you to analyze real-time data against multiple test criteria. You can compare test results and quickly determine whether the test measurement meets acceptance criteria.

In addition to the 3D Waterfall display, a new 2D Frequency/Order Slice display has been added to eZ-Analyst's analysis toolbox. The cursors that appear in the main Spectrum can also be seen in a 2D Frequency/Order Slice Strip Chart that plots the values under the cursors over time.

With eZ-Analyst's flexible display configuration capability, you can view the Spectrum, 3D Waterfall, 2D Frequency Slice or order track displays individually, or you can vertically tile any two of these displays into the same window.

eZ-Analyst

General Information & Ordering Information



Compare current and pre-acquired data in the same display window

Display Windows. Up to 8 with 16 data traces per window in either real-time or post analysis

Functions. Available display functions include Time, Spectrum, Order Spectrum, Order Track, Auto Spectrum, Waterfall, PSD, FRF (Magnitude, Phase, Real, Imaginary, Nyquist), Cross Spectrum, Coherence, Octave, Third Octave, Transfer Function (Inertance, Mobility, Compliance, Apparent Mass, Impedance, Dynamic Stiffness), and Averaged Time

Cursors

All cursors are selectable as independent of display window or locked for automatic tracking of frequency.

Single. Cursor displays Time or Frequency with amplitude and overall amplitude

Dual. Cursors display Time or Frequency with band overall

Harmonic. Displays fundamental and harmonics with the number of harmonics user selectable; harmonic markers have fine tuning

Side Band. Displays center frequency with \pm delta frequency

Peak. Displays peak amplitudes with user-selectable number of cursors; user-selectable threshold level sorted by amplitude or frequency

Free Form. User-selectable number of cursors that can be placed at any location on the data display

Export Data

UFF. Universal file format 58 ASCII or Binary

ME Scope Modal. Vibrant Technologies ME Scope native format

STAR Modal. Spectral Dynamics STAR native format

EXCEL. Microsoft® Excel®

RPC III. For road simulation

Record/Playback Data

eZ-Analyst allows the user to record real-time data to the computer hard drive while viewing the data. The data is saved on the computer hard drive as a contiguous time data file and can then be played back and analyzed. The acquisition hardware does not have to be connected to the computer to perform this function. Data can be recorded at maximum bandwidth, and the file size is only limited by the available space on the hard drive. During playback, all display functions are available to the user. Additionally, the user may select any percentage (0% to 99%) of overlap processing during playback.

Waveform Output (640 Models Only)

Allows several different types of waveforms including random, burst random, sine swept sine square waves as well as arbitrary waveforms from file. You can change the type of waveform, its signal level, DC offset, and for square waves, the duty cycle. Changes to these controls can be made while the waveform output is running. Burst on/off times are also selectable as well as sweep times for swept sine wave types. You can configure your waveform to output continuously, in a burst or to repeat. In addition, ramp up on start and ramp down on stop can be programmed to allow smooth transition of test equipment such as shaker tables. The waveform output feature also enables data capture on output start events so that analyzer data frames can be captured at the start of every waveform output sequence.

Configuration

From the eZ-Analyst menu or toolbar, you bring up the waveform output dialog and make your selection of the type of waveform you want to generate. You can choose from several types of static waveforms and swept waveforms. Or you can import data from a text file or eZ-Analyst Time History file to create an arbitrary waveform.

Predefined static waveform types include: Sine, Square, Triangle and Random; and provide settings for Offset, Amplitude, Frequency, and for Square waves Duty Cycle.

For Swept waves you can choose from: Sine, Square, Triangle and Chirp; and utilize settings for Offset, Amplitude, Start Frequency, End Frequency, Log/Lin sweep, and Sweep direction. You can also add an optional Amplitude ramp up at the start of your waveform, or an Amplitude ramp down at the end of your waveform.

Ordering Information

Description	Part No.
Real-time vibration analysis and recording software for the 600 Series, ZonicBook/618E, and WaveBook/516E operating under all 32-bit versions of Windows®	eZ-Analyst

Note: eZ-Analyst is included with the ZonicBook/618EZA package.

BUY NOW!

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