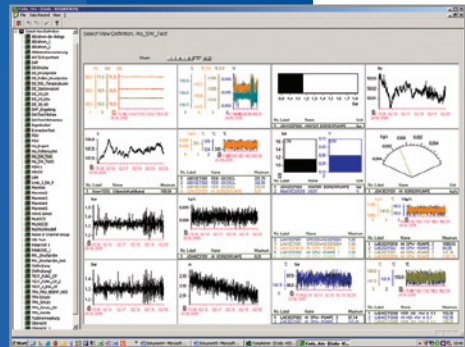# VTIcoda

Data Acquisition Software

powerful

full-featured

programming-free

VXI Technology™

Why waste time and money on expensive instrumentation setup, application programming and long learning curves?

Scalable Turnkey Program

VTIcoda data acquisition software is a powerful, flexible, easy-to-use software that delivers accurate repeatable results all the time, every time. VTIcoda supports VTI's fully scalable hardware facilitating end-to-end calibration that ensures higher accuracy while minimizing measurement uncertainty. Flexible displays, channel groupings, and runtime alarm indicators give the user a real-time picture of the test results and conditions.

Full-featured VTIcoda Eliminates Programming

- Eliminates costly application programming
- No need to qualify custom software
- Eliminates software debugging
- Simplifies training
- Long-term software support

Faster Setup. Simplified Operation. No Programming Required

Complete turnkey operation improves test efficiencies by eliminating time-consuming learning curves and software development delays. Menus for instrument setup, parameter selection, and display configuration reflect recommendations from experienced test engineers. The intelligent interface queries the data acquisition hardware and pre-loads information regarding specific parameters such as channel count, gain ranges, filter selections, and sample rates. This functionality greatly reduces the guesswork and eliminates configuration errors common with other general purpose data acquisition environments.

Flexible and Reconfigurable

Years of development and user-model evaluations have been leveraged to offer a package that is simple to use, but yet offers world-class power and flexibility. Menus for instrument setup, parameter selection, and display configuration have evolved through user feedback and recommendations to provide maximum utility without sacrificing instrument functionality.

Comprehensive Visualization

A variety of different graphical display formats are available for data measurement and analysis, which can be mixed and matched to create custom user interfaces to meet specific requirements. Users can freely design individual graphical interfaces for real-time measurement and visualization of data channels.

Scalable System for Thousands of Channels

The scalable architecture of VTIcoda makes this package ideal for any test size, from tens to thousands of channels. High-count systems can be easily configured and quickly ready to test.

Extensive Built-In Tools and Features

VTIcoda offers functionality that was previously available only in custom packages costing thousands more. Whether setting up a new test configuration or viewing the results, this easy-to use application simplifies the entire process.

- Intuitive configuration tools for easy and efficient system setup
- Flexible system configuration: modular, scalable
- Powerful measurement and data storage concept
- Continuous data acquisition with user-definable channel groups
- Different sampling rates for channel groups
- Integration of user-specific calculations for sophisticated data interpretation and display
- Real-time online graphical data analysis
- Scalable channel architecture easily handles high channel counts
- Integrated signal conditioning for analog data
- Integration and synchronization of different data sources
- Structured & simple user interface
- Online and offline analysis, visualization and reporting

VTIcoda

Intuitive Configuration Tools, Simplified Operation
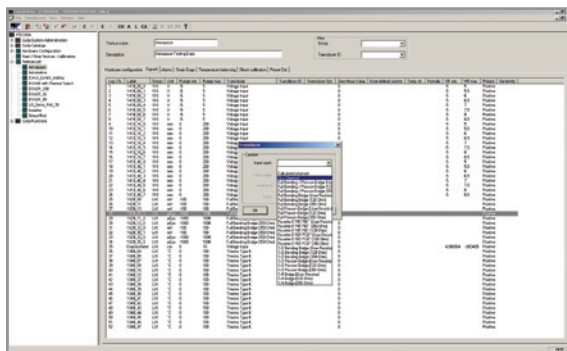
codaAdmin uses a simple tree structured database to manage test and measurement administrative tasks quickly and easily.

- Auto instrument identification
- Hardware configuration
- Hardware calibration
- Test run definition
- Test run operations
- Scalable from ten to tens of thousands of channels

Calculated Channels
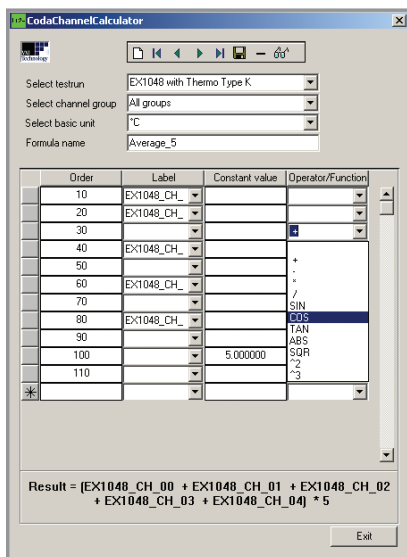
codaChannelCalculator

Apply mathematical calculations to channels with numerous standard functions. Calculations are performed real-time, and the resultant channels are treated like other "real" measured channels for display and reporting purposes.

- Arithmetic
- Exponential
- Easy creation and combination of formulas based on RPN
- Large Number of operators available such as +, -, *, /, SIN, COS, TAN, ABS, SQR, ^2, ^3
- User definable functions are included via DLLs

Extensive Graphical Display Format Options
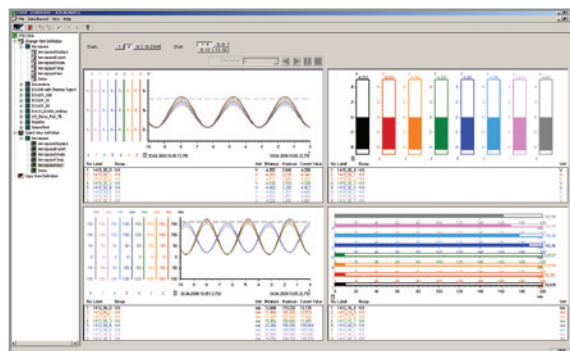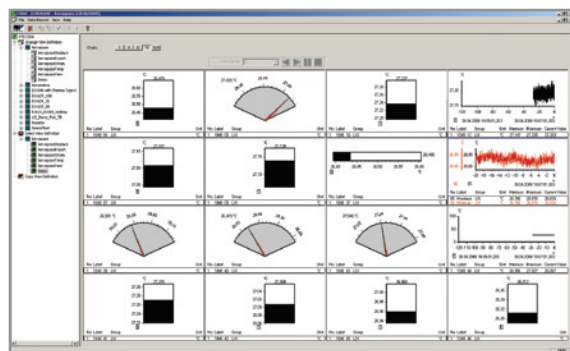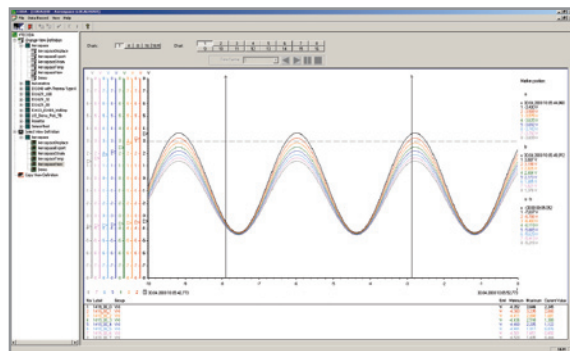
codaView

Data visualization and a mix of display formats & types can be viewed together to create custom user interfaces. Standard displays are as simple as a click of the mouse ensuring minimal training and user interaction to ensure data is displayed with clarity & is easy to visualize.

- Intuitive GUI & a variety of graphical display formats.
- Multiple displays – multiple threads, graphs & each channel can be highlighted & individually selected for detailed viewing of data.
- Full-featured
- Powerful

VTIcoda

Robust Graphical Analysis Tools
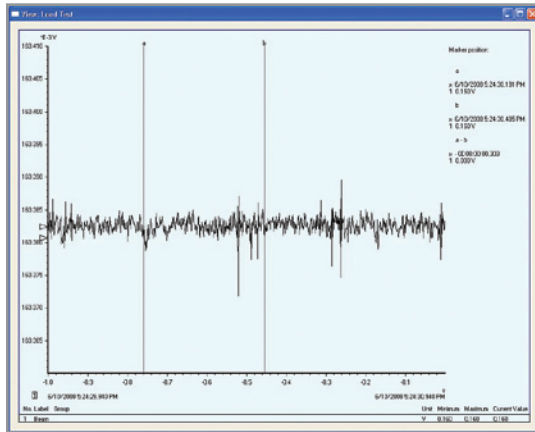
codaView allows the operator to view data in detail with on-line analysis of results with functions that include:
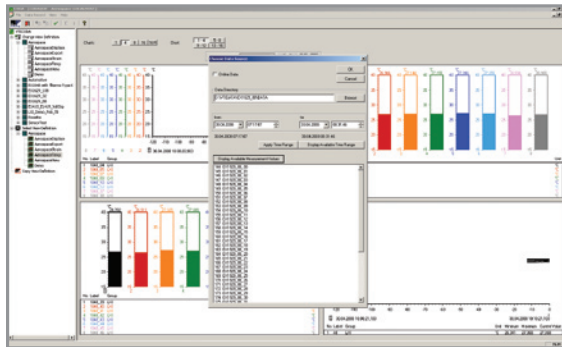
- Stepless zooming
- Smart cursor functions
- Differential markers

Quickly View and Analyze Captured Data

codaView makes playback of historical data and detailed analysis easily achievable and provides the following convenient tools:

- Forward and reverse replay speeds
- Events can be replayed without affecting the live acquisition process
- Channel isolation in individual windows
- Diagram and trace highlights, using colors, backgrounds, and differential markers

Triggered Data Capture

codaCollect allows the user to take snapshots of the data in digital format.

- Snapshot of all measured data or of a filtered group
- Unlimited number of snapshots per test run
- Manual/triggered acquisition
- Export to ASCII, Excel™, MATLAB™ and other popular analysis packages.

Full-Featured Alarm Monitoring

codaAlarm

Provides an overview of all active channels and their current status with regard to alarm violations.

- Independently define alarms for all channels in the system
- Alarms can trigger off of actual or calculated channels
- Alarm events are entered into the log file
- View alarm status for > 100 simultaneous channels

Log and View Events of Interest

codaLog

Log events of interest and view them in a separate window. Event time is captured as well as channel information and event messaging.

Learn more about VTIcoda. See our demo at www.vxitech.com/VTIcoda.aspx

VTIcoda

APPLICATIONS

Continuous Data Acquisition and Monitoring

VTIcoda applications include static, dynamic, transient testing with continuous monitoring using LXI and VXI bus hardware platforms.

Production Data Evaluation and Analysis

Process data acquisition by locally distributed units with real-time analysis and online visualization, centralized data server for quality assurance and production planning.

Process & Plant Monitoring

Trend, event & efficiency data from process, power or other industrial plants can be distributed to engineers' workstations for live data analysis of critical safety, performance & event monitoring.

Powerful, Versatile Features

Intuitive Graphical User Interface

VTIcoda runs in the familiar Microsoft Windows environment which minimizes learning time and makes VTIcoda easier to use. It means that time is focused on the task, and not spent programming and debugging code. All instruments are configured with one GUI.

Real-Time Alarm Monitoring and Limit Checking

VTIcoda provides limit checking and alarm monitoring on every channel. Out-of-limit data is displayed in a separate window and logged.

Real-time mathematical functions and data manipulation VTIcoda simplifies data manipulation tasks with a variety of standard built-in functions. Calculations are performed real-time, and the resultant channels can be treated like other measured channels for analysis and reporting purposes.

Scalable System for Thousands of Channels

The scalable architecture of VTIcoda makes this package ideal for any test size, from tens to thousands of channels. High-count systems can be easily configured and quickly ready to test.

Online Data Analysis

Acquired values can be graphically displayed in a y/t- or y/x-diagram, as bar chart, tachometer or digital numbers. The multi-client function allows the display of the data on multiple workstations. Standard displays, available with the click of a mouse, simplify setup.

Built-in Graphical Analysis

Convenient analysis tools are included for viewing measured data, including stepless zoom and smart cursor functions for detailed event examination. Display function supports a variety of standard features including differential markers, auto or fixed scaling, and linear or logarithmic display types.

Replay Function

An easy-to-use data replay function, with adjustable forward and reverse replay speeds, permits reviewing events without affecting the live acquisition process. Additionally, specific channels of interest can be isolated in separate individual windows, and highlighted with diagram-specific color settings for individual traces, background, and markers.

User-definable Channel Grouping

Acquired data and computed channels can be freely combined in user-definable groups for subsequent analyses.

Database-Supported Management

All VTIcoda configuration data is stored in a central SQL database for maximum flexibility and reliability. Users can change the number of channels to be acquired and the number of instruments to be connected. In addition, the tree structure of the database provides flexibility to allow the user to react to specific requirements at any time.

VTIcoda

Client/Server System

The powerful client/server architecture allows shared use of acquired data, enabling several clients to have concurrent online access for data display and analysis operations. The online server approach also ensures reliable data archival and retrieval with integrated error diagnostics to guard against connection and data access issues.

Post-test Analysis and Data Export

Data is easily accessible and displayed from within VTIcoda, or exported for analysis in other applications. Powerful data display capabilities featuring zoom, runtime limits, and forward/reverse replay maximize the user's experience. Supported industry standard file formats include SDF, CSV, ASCII, and Excel™.

Standardized Data Interfaces

VTIcoda enables easy integration of different measurement devices, acquisition of data coming from process control systems (e.g., via LAN, FireWire, etc.).

Learn more about VTIcoda. See our demo at www.vxitech.com/VTIcoda.aspx

VTIcoda Versions

VTIcoda-Express

≤ 96 Channels

Single PC Client/Server Configuration

Single instrument category support

Automatic Instrument identification

Instrument setup

   Basic arithmetical operations (mx+b)

   Channel grouping

   Save/recall current setup

Data logging/export (CSV/Excel™ compatible)

Data displays

   Digital/Tabular displays

   Strip chart

   Time history

   X-Y graph

   Bar graph

   Tachometer

   Marker functions

Manual start/stop of measurement

Event logging

64 channels per diagram, 16 diagrams per window

Unlimited number of windows

Raw data management

   Save/recall current setup

   Save/recall data

   Data playback

   Database management

VTIcoda-Pro

≤ 240 Channels

Single PC Client/Server Configuration

Multiple instrument category support

All the features in VTIcoda-Express system plus:

   Full alarm management (based on hi/lo limit values)

   Calculated channels

   Base operations

   Circular buffer

   Running average

   Calculated stress and strain (single channel)

VTIcoda-Expert

≥ 240 Channels

Single Client/Single PC networked system

All features in VTIcoda-Pro system

   Calculated stress and strain (Rosette)

   Real-time stress calculations

   Predicted stress calculations

   Alarm management based on predicted stress

   Multi-workstation support

   Remote display capability

   FFT computation/display

   Excel™ import/export channel setup

   Strip chart/time history for max/min values

VTIcoda

System Requirements

- Intel® DualCore (> 2,4 GHz)
- Microsoft® Windows XP with Service Pack 2 (Professional, Home or Tablet PC-Edition), Windows 2000 with Service Pack 4
  Note: The Microsoft® Windows (NT or XP) operating system Asian languages version is not supported.
- 2048 MB RAM (4096 MB recommended)
- 2x200 GB available hard disk memory (mirrored)
- Screen resolution: 1280 x 1024
- 32MB dedicated graphics card

Ordering Information

VTIcoda incorporates the same philosophy of modularity and scalability implemented in our data acquisition instrumentation. Simply determine the channel count and feature set that is right for the application. If additional features are needed in the future, just upgrade your package while maintaining total compatibility with all previous data and hardware implementations.

VTIcoda-Express	Support for 96 channels
VTIcoda-Pro	Support for up to 240 channels
VTIcoda-Expert	Support for greater than 240 channels plus Stress Analysis
VTIcoda-Incr	144 channel incremental upgrade to
	VTIcoda-Pro and VTIcoda-Expert
	Requires licensed version of VTIcoda-Pro or VTIcoda-Expert
VTIcoda-CS	Additional client support
	(VTIcoda-Expert single additional client)
VTIcoda-UPGR-EP upgrade	VTIcoda-Pro to VTIcoda-Expert
VTIcoda-UPGR-PE upgrade	VTIcoda-Express to VTIcoda-Pro
VTIcoda-UPGR-EE upgrade	VTIcoda-Express to VTIcoda-Expert
VTIcoda-UPGR-XW12	12-Month extended maintenance coverage
VTIcoda-UPGR-XW36	36-Month extended maintenance coverage
VTIcoda-LCS	Support interface for load control

LXI Hardware Supported

Fatigue/stress testing	EX1629
Temperature/voltage	EX1000A
	EX1016A
	EX1032A
	EX1048A

VXI Hardware Supported

Multifunction DAQ	VT1413C/VT1415A/VT1419A

About VXI Technology, Inc.

VXI Technology, Inc. (VTI) is the market leader in functional test and data acquisition systems. ISO9001:2000 registered, the company serves the aerospace, automotive, avionics, defense, industrial automation, medical, satellite communications, and telecom markets. The company engineers and produces over 200 components and subsystems to build both custom and standard test systems. With plants in the U.S., Europe and Asia, worldwide product support is provided through a network of VTI-certified engineering representatives. VTI is a sponsor member of the VXI Consortium and a strategic/founding member of the LXI Consortium.

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www.vxitech.com