VTcoda
Data Acquisition Software

- powerful
- full-featured
- programming-free
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

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

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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.
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.).

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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
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
- 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
- **VTicoda-CS**: Additional client support (VTicoda-Expert single additional client)
- **VTicoda-UPGR-EP**: Vticoda-Pro to Vticoda-Expert
- **VTicoda-UPGR-PE**: Vticoda-Express to Vticoda-Pro
- **VTicoda-UPGR-EE**: 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.

For more information visit vxitech.com or email sales@vxitech.com.