



The Power of One

IS8000 Integrated Software Platform



Precision Making

Bulletin IS8000-01EN

For over 100 years, Yokogawa has built a reputation on understanding the needs of researchers, scientists, and engineers across the globe. To ensure reliable and trustworthy results, these professionals require accuracy, stability, and reproducibility from their measurement system.

The IS8000 software platform is an integrated solution that accelerates engineering workflow. It is a revolutionary software that tightly integrates the timing, control, and data collection from multiple instruments, creating a comprehensive measurement suite that delivers confidence, efficiency, and unity.

Unity

Unification of Yokogawa instruments ensures measurement coherency during the product development process and allows for effortless data sharing throughout an organization. IS8000 makes it easier to debug and analyze data by viewing all measurements under one unified display.

Efficiency

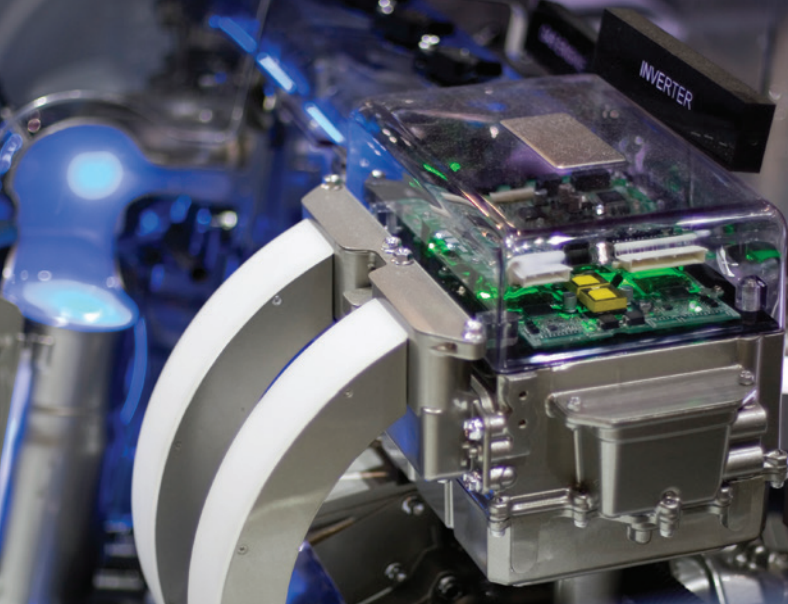
IS8000 allows you to streamline the product development process by spending less time developing testing systems and more time collecting valuable test data. With one software to setup and control all the instruments you need, you can start measuring data faster and more efficiently.

Synchronization

Storing data in one format and location has never been simpler. IS8000 gives you data you can trust by synchronizing measurements across multiple instruments utilizing an IEEE1588 time base.

Scalability

With today's fast evolving technology, a software that has the ability to expand is crucial. As your needs evolve, so can IS8000. Analyze your data deeper with add-on software packages.



The Power of One

Power Measurement, High-speed Waveform Logging, and Analysis Software in a Single Package

The IS8000 software platform is an integrated solution that accelerates engineering workflow. It is a revolutionary software solution that tightly integrates the timing, control, and data collection from multiple instruments, creating a comprehensive measurement suite that delivers high confidence, efficiency, and unity.



- 1 Acquired waveforms
- 2 Power trend display
- 3 Power numeric display
- 4 Three-phase vector diagram
- 5 Remote control interface
- 6 FFT Analysis (MH1 option)
- 7 High-speed camera image (FS1 option)

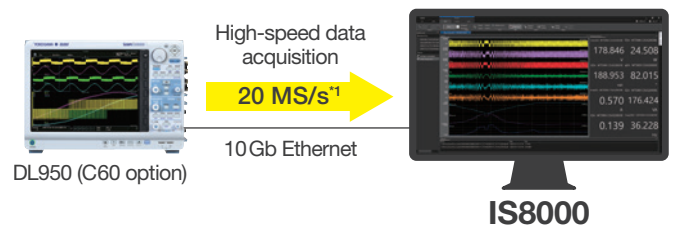
Accelerate Your Engineering Workflow

| Device control | Measurement | Analysis | Export |
|---|---|----------------------------------|--|
| Device Settings Remote Monitoring | High-speed Acquisition | Enhanced Viewer | Export to CSV CSV |
| Application Control Interface | High-Speed Cam. Sync. | Interharmonic/ Harmonic analysis | Export to MDF MDF |
| Modbus/TCP Communication | ECU Monitor Sync. | FFT Analysis Enhanced Math | Report Generator |
| Multi-unit connection Power & Waveform Sync. | IEC Harmonic/Flicker Test & Analysis IEC 61000 | Serial Bus Analysis | Standard functions of the software platform Add-on Functions Only available in IS8011/8012 |

A Variety of Real-time Data Acquisition and Synchronization

High-speed and long-term data acquisition via 10 GbE

By combining the 10 GbE option (C60 option) on the DL950 and the IS8000, up to 8 channels of data can be stored in real time on a PC at a sampling rate of up to 20 M Sample/s^{*1} with no limit on recording time^{*2}. Even high-speed and multi-channel inputs, such as gate signals and switching waveforms of multi-phase inverters, can be recorded for long periods of time, reducing evaluation time significantly.

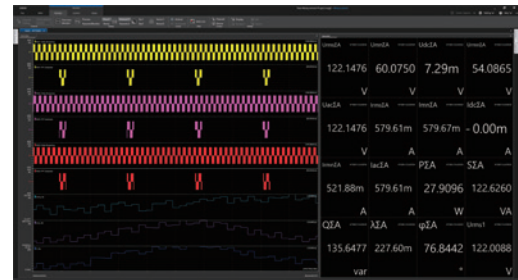


*1 With 1 Gb Ethernet/USB connection, the maximum transfer rate is 6.4 MB/s (200 kS/s × 16 ch).

*2 Data can be recorded until the remaining storage space of the PC becomes less than 10%.

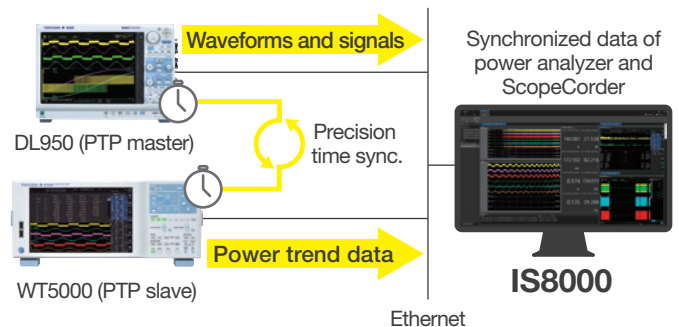
Real-time Recording of Power Parameters and Voltage and Current Waveforms by the Precision Power Analyzer

The IS8000 supports the WT5000's remote measurement. It provides numeric display of power parameters, trend graph, and real-time display of voltage/current compressed waveforms. In addition, the WT5000's DS option allows you to continuously record waveform data synchronized with power parameter measurements without any gaps and compression. This enables detailed analysis to understand how the noise on waveforms or the change in control state affects the power values and parameters.



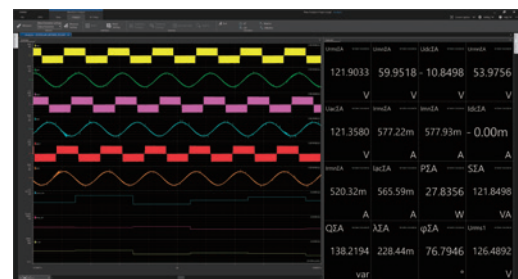
Multi-unit measurement with Time Synchronization SY1 option

The IS8000's SY1 option enables up to 5 units of the WT5000 precision power analyzer and the DL950 ScopeCorder to be connected for highly accurate synchronized measurement. It also allows simultaneous recording and display of highly reliable power measurements calibrated to national standards and high speed, high precision voltage/current and motor torque waveforms. Motors and inverters can be evaluated accurately and efficiently.



Data Integration and Analysis, File Output

The IS8000 allows multiple measurement data files to be overlaid and displayed with the start or end of the data, trigger timing, or measurement time as a reference point. Data files of synchronous measurement using the high-precision time synchronization feature (IEEE1588PTP) or the connection function between the same models of the WT5000, DL950, and DLM3000/5000 series can be integrated and displayed as a single measurement data on the IS8000.



Extensive Measurement data and analysis functions

Synchronization High-speed camera FS1 option

IS8000 synchronizes high speed camera^{*1} images with related current, voltage, and control signals. Simultaneous slow motion playback allows visualization between design and results. In addition, the video files^{*2} captured by non-supported cameras can also be imported and played back in sync with waveforms and power trend data with IS8000.

*1 Supported camera: Photron's FASTCAM SA-Z, Mini AX/UX/WX series, FASTCAM Nova S series and Nova R2

2 Supported video file format: AVI (.avi), MP4 (*.mp4), WMV (*.wmv), AVCHD (*.mts), MOV (*.mov), MPEG2-PS (*.mpg, *.mpeg)

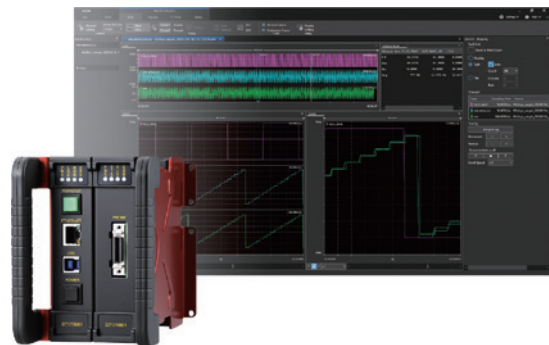


Synchronized Measurement with RAM Data EM1 option

IS8000 can acquire vehicle control data created by the control MPU in the Electronic Control Unit (ECU) via the DTS Insight's RAMScope series, a verification tool for MPU control software. The DL950 provides noise-resistant, multi-channel, high-speed, high-voltage inputs and synchronous measurement of RAM values, which are effective in evaluation of power units that control inverters in response to load fluctuations.

Applicable instruments: DTS INSIGHT RAMScope GT170 (RAM measurement module only), GT122

Applicable model: DL950



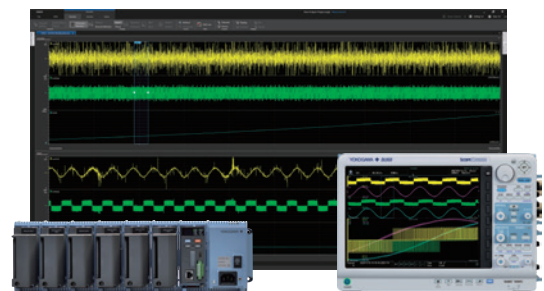
Serial Bus (CAN bus) Analysis SB1 option

This function enables decoding of communication contents, frame display, and search for specific information in CAN bus communication signal. This new serial bus analysis option can also be used to analyze signal waveforms acquired not only by YOKOGAWA's oscilloscopes but also by the ScopeCorder series and IS8000.



Simultaneous Measurement with Modbus/TCP Communication Devices MB1 option

Samples of communication configuration file to connect with the YOKOGAWA GM10 and VZ20X recorders is included with the software. The included tool can also create configuration files to connect other Modbus/TCP communication devices. This feature is very useful in development of air conditioning equipment and other applications that require many input channels, long recording times and a wide variety of temperature sensors.



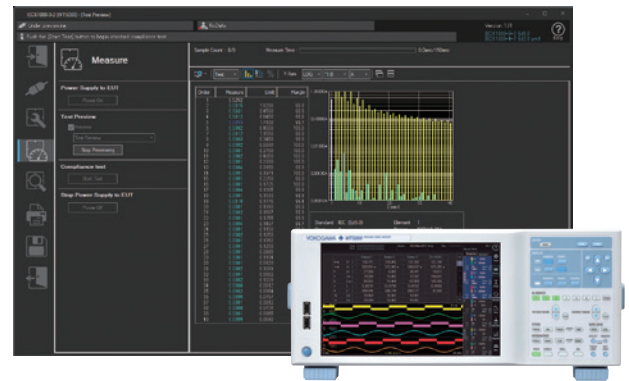
Measurement of Harmonic with International Standard

IS8011/IS8012 Harmonic/Flicker Analysis Software

Optional software package for IEC Harmonic and Flicker compliance test

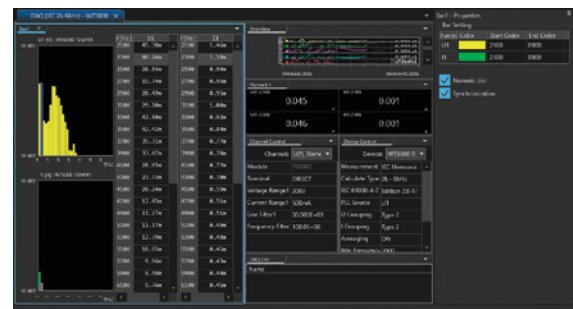
IS8011/IS8012 optional software package is designed to perform harmonic and flicker tests in accordance with IEC61000-3-2, 3-3, 3-11 and 3-12 standards using the WT5000 precision power analyzer. Users can easily set the conditions and output the test report without any specialized knowledge.

Users can make a pass/fail judgment by class A, B, C, and D of the harmonic current measurement values.



IS8001/IS8002 Standard Function for IEC Harmonic Display

Harmonic measurements in accordance with IEC standards can be displayed by combining the IS8001 or IS8002 with the WT5000 Precision Power Analyzer (with G7 option). Harmonic grouping specified in IEC61000-4-7 Ed.2.1 Annex A and B is supported, and measurement can be performed according to various standards related to the IEC61000-4-7.



Example of supported harmonic grouping and related standards

| Edition for IEC 61000-4-7 | grouping | Harmonic order / Frequency | Related standard |
|---------------------------|--------------------------------|--|------------------|
| Ed. 2.1 Annex A | Harmonic subgroup | 2 nd to 50 th | VDE-AR-N 4105 |
| | Interharmonic group | 2 nd to 50 th (105 Hz to 2545 Hz) for 50 Hz Power system 2 nd to 50 th (125 Hz to 3055 Hz) for 60 Hz Power system | IEEE1547-2018 |
| | Interharmonic centred subgroup | 1 st to 39 th (60 Hz to 1990 Hz) for 50 Hz Power system 1 st to 32 nd (70 Hz to 1970 Hz) for 60 Hz Power system | VDE-AR-N 4105 |
| Ed. 2.1 Annex B | Harmonic group | 2 kHz to 9 kHz | VDE-AR-N 4105 |

Difference between IS8001/IS8002's harmonic display function and IS8011/IS8012

| Software | Application | Applicable model |
|--|---|---------------------------|
| IS8001/IS8002 Integrated Software Platform Harmonic display function | Display and save the results of harmonic measurement of equipment performed by the WT5000 in accordance with IEC and EN standards. IEC 61000-4-7 Ed. 2.1 Annex A and B are supported. | WT5000 G7 is required. |
| IS8011/IS8012 IEC Harmonic/Flicker Software | Measure harmonics and voltage fluctuations/flickers of equipment in accordance with IEC, EN, and JIS standards in combination with the WT5000 and display and save the results of compliance judgment according to the standard for limits . | WT5000 G7 is required. |

High-speed and Simple Waveform Viewer Software

IS8002CDV Classic Data Viewer

The IS8002CDV Classic Data Viewer is waveform display software that inherits the design and performance of the 701992 Xviewer software, a standard waveform viewer for YOKOGAWA oscilloscopes and ScopeCorders. It delivers easy and swift processing and enables you to remotely control a measuring instrument, transfer data, view files, and perform math analysis (optional). The Classic Data Viewer supports the latest oscilloscopes and ScopeCorder in addition to YOKOGAWA's conventional measuring instruments that are supported by Xviewer.

the IS8002CDV Classic Data Viewer does not have the following functions and options that are provided by the 701992 Xviewer software:
Report generator, XviewerEYE, and DL850 advanced utility



Main & Zoom Display

A quick zooming function allows users to display an entire waveform and zoomed waveform at the same time to view it in detail. Even a large amount of data captured by the DL/DLM series models can be zoomed in and out smoothly.

Automated Measurement of Waveform Parameters

Various parameters can be automatically measured on a displayed waveform. The results of parameter measurement can be saved as a file in CSV format.

Data Format Conversion

The data format of a file can be converted to CSV (ASCII) or Excel. Multiple files can be converted at once.

Communication with Instruments

Connect an instrument to the IS8002CDV Classic Data Viewer via Ethernet, USB, or GP-IB to transfer data, remotely control the instrument and download waveforms.

Waveform Math Function (optional)

Up to 32 channels of math waveforms can be defined and displayed based on the measured waveform data. The waveform math feature allows for FFT analysis and digital filter computation and provides a variety of frequency-domain analysis functions, such as power spectrum.

IS8002CDV vs IS8001/IS8002

| | IS8002CDV Classic Data Viewer | IS8001/IS8002 ¹ Integrated Software Platform |
|---|---------------------------------------|--|
| Remote Operation of Measurement Instruments | | |
| DL950 (10 GbE Connection) | ✓ | ✓ |
| DL950 (1 GbE, USB) | ✓ | ✓ |
| WT5000 (1 GbE, USB) | | ✓ |
| Other DLM, DL series | ✓ | ✓ |
| Waveform Display | | |
| Max. Displayed Waveforms | 90 ch/Gr. × 10 Gr. | 128 ch/Gr. × 16 Gr. |
| Display Formats | Main, Zoom, History, X-Y | Main, Zoom, History, X-Y |
| Cursor | Vertical, Horizontal, X-Y | Vertical, Horizontal |
| Waveform Parameter Measurements | 28 parameters | 28 parameters |
| Statistical Calculations | Cycle statistics, History statistics | Cycle statistics, History statistics |
| Waveform Computation (available only with the Math option) | | |
| Max. Displayed Waveforms | Math (including FFT) 32 ch | Math 16 ch, FFT 16 ch |
| Operator | 59 types | 59 types |
| Max. Number of computed points | 12.5 M points | 100 M points |
| FFT Window | Rect, Hanning, Flat top | Rect, Hanning, Flat top, Hamming |
| Digital Filter | Gauss, Sharp, IIR | Gauss, Sharp, IIR |
| Max. FFT Points | 2 M points | 100 M points |
| Waveform Data Loading and Conversion | | |
| WDF files, WVF files | ✓ (Loading ² , Conversion) | ✓ (Loading ³) |
| CSV files | ✓ (Loading, Batch Conversion) | ✓ (Loading, Batch Conversion) |
| MAT (MATLAB) files | ✓ (Loading, Conversion) | |
| MDF files, MF4 files | | ✓ (Loading, Conversion) |
| Online Measurement | | |
| WT5000 (Numeric, P-P waveforms, DS waveforms, harmonics) | | ✓ |
| DL950 (10 GbE connection) | | ✓ |
| DL950 (1 GbE, USB) | | ✓ |

¹ Classic Data Viewer is available at no extra charge on PCs with a valid IS8001/IS8002 license activated.

² DL950 and DLM3000HD file import will be supported by the future update.

³ DLM3000HD file import will be supported by the future update.

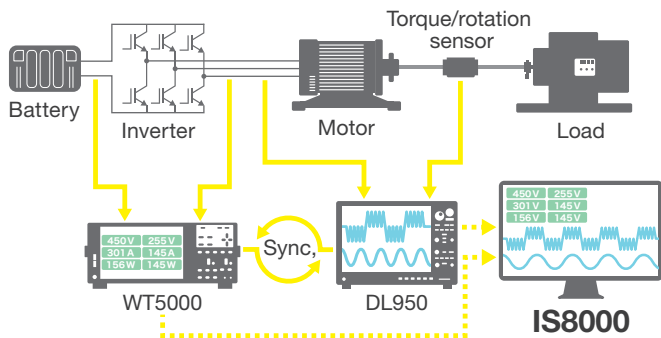
Applications

Evaluate all electrical and mechanical test faster with IS8000

Motor Efficiency

High Precision synchronized power and high speed recorder measurements

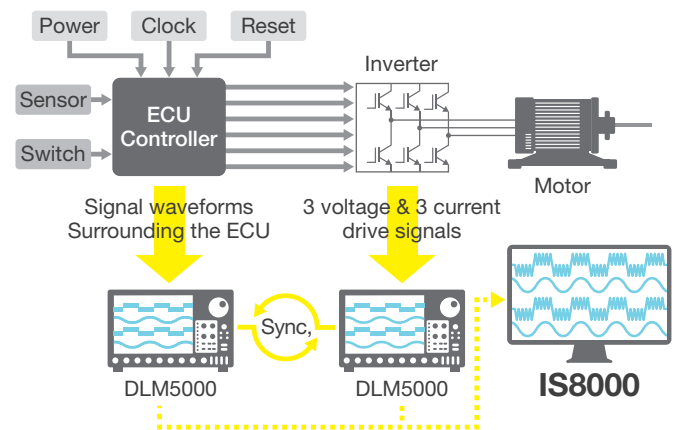
Data from the WT5000 power analyzer and DL950 ScopeCorder is time correlated with less than 10 μs error using IEEE1588 PTP technology. Precise power parameters and waveforms are displayed on the same time axis.



Switching Waveform Analysis for IGBT Inverter

Combining multiple waveforms

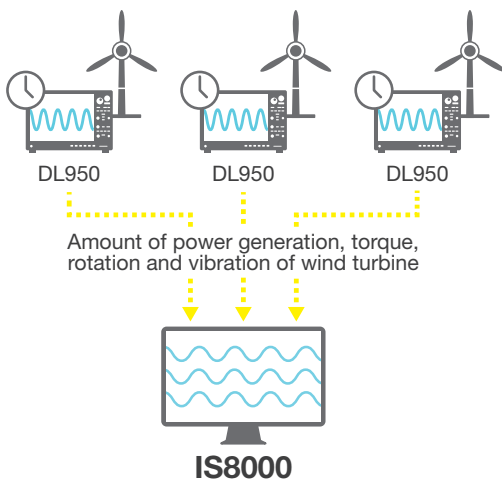
More than 8 waveforms are required to measure inverter performance in a loaded system. IS8000 can connect with multiple 8 channel DLM5000 oscilloscopes for analog and digital signals to scale up to any channel requirement, all in one control and viewing interface.



Solar/Wind Power System Development

View and compare waveforms from multiple instruments

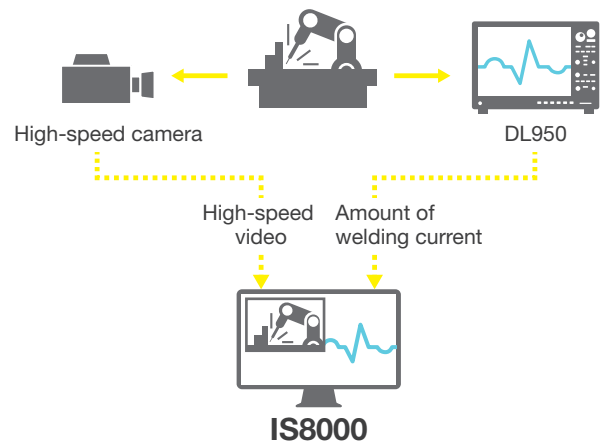
IS8000 can easily synchronize waveforms from multiple instruments, creating an easy view for comparison. Manipulating waveforms is easily done with zoom and pan controls to analyze long records of energy waveforms.



Analysis of Robotic Welding Control

Simultaneous recording of multiple signal types

IS8000 displays multiple inputs. The camera image is aligned in time with the other waveform, including the control signals and the voltage and current waveforms. Simultaneous slow motion playback allows visualization between design and results.



Main Specifications

| IS8001/IS8002 Integrated Software Platform | |
|--|---|
| Please refer to our website for the most up-to-date specifications; the information provided here pertains to Version 24.3. | |
| Connecting support firmware | |
| DL950 | Ver. 1.50 or later |
| WT5000 | Ver. 3.31 or later |
| Languages | |
| English/Chinese/Japanese | |
| PC requirements | |
| For data acquisition with 10 Gb Ethernet connection; Desktop PC required/CPU: Intel Core i7-1165G7 or later Intel CPU with 4 or more cores (8 or more threads), 4.7 GHz or faster/Amount of memory: 16 GB or more/Amount of SSD: 512 GB or more (M.2 slot is recommended, Sequential read/write 3 GB/s or faster) | |
| For data acquisition with 1 Gb Ethernet/USB connection and offline analysis; CPU: Intel Core i5-10210U or later Intel CPU with 4 or more cores (8 or more threads), 4.2 GHz or faster/Amount of memory: 8 GB or more/Amount of SSD: 256 GB or more (Sequential read/write 400 MB/s or faster) | |
| OS | |
| Windows 11 Pro or Enterprise edition (except EM1 option) Windows 10 64 bit Pro or Enterprise edition | |
| Communication interface | |
| USB (USBTMC/VISA), Ethernet (VXI-11, HiSLIP, Modbus/TCP ⁹) | |
| Display resolution | |
| 1366 × 768 dots or higher, 100% zoom | |
| Number of connectable units | |
| Up to 5 units (Only one unit without SY1 option; SY1 option is required even if the time synchronisation is not used) | |
| Supported file format | |
| WDF | DL350, DL850 series, DL950, SL1000, DLM2000 series, DLM4000 series, DLM3000HD ¹¹ /DLM3000/DLM5000HD/DLM5000 series |
| CSV (Waveform data) | DL950, DL850 series, DL350, DLM3000HD ¹¹ /3000/5000HD/5000 series, DLM4000/2000 series, Xviewer Application Software and IS8000 ⁹ |
| CSZ | IS8000 CSV data compressed in ZIP format |
| CSV (Power measurement data) ² | WT5000 (without multi-unit sync. based on IEEE1588 PTP) WT5000 (with multi-unit sync. based on IEEE1588 PTP) WT3000 series ¹ WT1800 series |
| MF4 | IS8000 data files ASAM MDF 4.1 files |
| WVF | DL750, SL1400 |
| mepjt, anpjt | IS8000 Project files |
| Export file formats | |
| ASAM MDF 4.1 files (mf4), ASCII files (csv), CSV files compressed in ZIP format (csz) | |
| Online data acquisition (DL950)⁷ | |
| Motion mode | Scope mode (Trigger/Free-run) ⁴ The trigger mode cannot be used with multi-unit synchronized DL950s. |
| Maximum transfer rate | 10 Gb Ethernet connection: 320 MB/s (20 MS/s × 8 ch, 10 MS/s × 16 ch) 1 Gb Ethernet/USB connection: 6.4 MB/s (200 kS/s × 16 ch) |
| Online data acquisition (WT5000)⁷ | |
| Monitoring/DAQ items | Power trend graph and numeric Data-streaming waveform ³ Harmonic bar graph ⁹ Vector diagram |
| Online data acquisition (common)⁷ | |
| Maximum continuous recording time/size | The recording will be kept until free storage space falls below 10%. |
| Maximum recording channels | 128 channels |
| Display format | |
| Common | TY-Overview (up to 128 ch for each group, up to 16 group), XY (up to 2 windows for each group), TY-View (up to 4 areas for each group), Numeric Monitor (Up to 128 channels) |
| For WT5000 | Power trend graph and numeric display, Peak-to-peak compressed waveform (Data update interval: 1 s or slower), Data streaming waveform display ³ , Bar graph of the amplitude and phase of each harmonic ^{9,10} , Harmonic list display, Matrix display, Vector diagram |
| Waveform overlays | |
| Aligned by time, absolute time, head of data, end of data or arbitrary position | |
| Automated waveform parameter measurements | |
| Parameters | 28 parameters (including P-P, Amp, RMS and Freq). |
| History statistics | Waveform parameters for each waveform in the historical memory and their statistics can be calculated automatically. |
| Cycle statistics | Waveform parameters of each period of a cyclic waveform and their statistics can be calculated automatically. |
| Cursor | |
| Vertical (up to 2 cursors in a window), Horizontal (up to 2 cursors in a window) | |
| Annotation | |
| Comments, acquired data and calculated values can be added on the overview/view, waveform window and X-Y window. | |

| | |
|--|--|
| Supported devices | |
| Data acquisition | DL950, WT5000 (760903 Current Sensor Element supported. 10 ms update rate supported.) |
| Flash ACQ data saving | DL950 |
| Remote control and setting, acq. data download | DL350, DL850 series, DL950, DLM3000HD ¹¹ /3000/5000HD/5000 series, DLM4000/2000 series, WT5000 (Remote control and setting only) |
| Data file import | DL350, DL850 series, DL950, SL1000, WT1800 series, WT3000 series, WT5000, DLM3000HD ¹¹ /3000/5000HD/5000 series, DL750 (Only WVF files), SL1400 (Only WVF files) |
| Screen Capture | |
| Save | Clipboard, png, jpg, gif |
| CSV batch converter | |
| Load | MF4 (MDF4.1), WDF, WVF |
| Save | CSV, CSZ (CSV compressed in ZIP format) |
| Mathematical data analysis (MH1) | |
| Number of Math channels | Up to 16 channels |
| Operators | +, -, ×, /, Phase shift, ABS, SQRT, LOG, EXP, RMS, NEG, SIN, COS, TAN, ATAN, PH, DIF, DDF, INTEG, BIN, P2, P3, F1, F2, FV, PWHH, PWHL, PWLH, PWLL, PWXX, DUTYH, DUTYL, FLT1, FLT2, HLB, MEAN |
| Number of computed points | Up to 12.5 M points or up to 100 M points can be supported by installing MATLAB Runtime |
| Digital filters | Gauss, Sharp, IIR (Butterworth) |
| FFT analysis (MH1) | |
| Operator | Type: LS, RS, PS, PSD, CS, TF, CH Sub-type: REAL, IMAG, MAG, LOGMAG, PHASE |
| Window function | Rect, Hanning, Flat top, Hamming |
| Number of FFT channels | Up to 16 channels independently |
| Number of computed points | Up to 2 M points or up to 100 M points can be supported by installing MATLAB Runtime |
| Serial bus analysis (SB1) | |
| Supported protocol | CAN (CAN FD is not supported at present.) |
| Search target | SOF, ID/Data, Error |
| Number of search points | Up to 100,000 frames |
| Bit rate | Select the value from 33.3 kbps, 83.3 kbps, 125 kbps, 250 kbps, 500 kbps, 1 Mbps, or enter it within the range of 10 kbps to 1 Mbps in 0.1 kbps steps. |
| Report Generator (RP1) | |
| Export | Microsoft Word, Excel, PDF, Print |
| Components | Waveforms, Measurement data, Comments, Images |
| High-speed camera Sync. (FS1) | |
| Supported cameras for online sync | Photron's FASTCAM SA-Z, Mini UX ⁹ /AX/WX series, NOVA S series, NOVA R2 |
| Supported video format for online sync | high-speed camera video files (avi) |
| Supported devices for online sync | DL950 |
| Supported video file formats for offline sync | AVI (*.avi), MP4 (*.mp4), WMV (*.wmv), AVCHD (*.mts), MOV (*.mov), MPEG2-PS (*.mpg, *.mpeg) |
| ECU Monitor sync. (EM1 option) | |
| Supported monitoring tools | DTS INSIGHT's RAMScope GT170 (only for the variable data acquisition and calibration module), GT122 |
| Supported data file | RAMScopeVP output files (a2l) |
| Supported devices for online sync | DL950 |

¹ Harmonic measurement data excluded.

² The measurement data of first 128 channels can be imported.

³ DS option is required for the WT5000 to be connected.

⁴ Trigger DAQ with DL950 external clock input is not supported. Freerun DAQ with DL950 external clock input, including 16-channel input module or CAN/CAN FD/LIN/SENT module, is not supported.

⁵ Pre-trigger recording and multi-trigger recording using the Mini UX series in combination with the FS1 option are not supported.

⁶ Only CSV files saved with Ver. 22.6.1.0 or later IS8000 can be imported.

⁷ Connecting instruments and collecting data with multiple launches of the IS8000 software on the same PC is not covered by the specification.

⁸ MB1 option is required.

⁹ The G7 option is required on the connected WT5000 to display measurement data compliant with IEC 61000-4-7 Ed. 2.1 Annex B (2 kHz to 9 kHz).

¹⁰ Firmware version 3.61 or later and the G7 option are required on the connected WT5000 to display interharmonic measurement data compliant with IEC 61000-4-7 Ed. 2.1 Annex A.

¹¹ Will be supported by the future update.

| IS8002CDV Classic Data Viewer | |
|---|--|
| Please refer to our website for the most up-to-date specifications; the information provided here pertains to Version 1.01. | |
| Compatible instruments (Remote control of the DL series, Waveform Viewer) DL950 ¹ ?, DL350, DLM5000HD, DLM5000, DLM3000HD ² , DLM3000, other DL/DLM series, SL1000, and each series of the above models | |
| PC System Requirements PC capable of running Windows 10/Windows 11, Intel Core i5-10210U or later Intel CPU with 4 or more cores (8 or more threads), 4.2 GHz or faster, 4 GB or more memory | |
| Display Resolution 1366 × 768 dots or higher, 100% zoom | |
| Supported File types Binary format (*.wvf, *.wdf) ASCII format (*.csv) MATLAB format saved by DL950, DL350, DL850 series and this software (*.mat) | |
| Max. Number of displayed waveforms 90/Group, Up to 10 Groups can be set | |
| Display format Main, Zoom, History, X-Y | |
| Number of divided Windows Max. 16 | |
| Cursors Vertical, Horizontal and X-Y | |
| Annotation Comments can be added in the Main, Zoom and X-Y windows | |
| Automated Calculation of Waveform Parameters 28 parameters such as P-P, Amp, RMS and Freq. Cycle Statistics and History Statistics. | |

| | |
|---|--|
| Save file format | Waveform data file (*.wvf, *.wdf, *.csv, *.xls, *.fld, *.mat) Screenshot file (Clipboard, *.bmp, *.png) Waveform parameters automatically calculated, Display settings (*.csv) |
| Print | Waveform displayed |
| Waveform Data Conversion | Waveform data files (*.wvf, *.wdf) can be converted to *.csv Waveform data files (*.wdf) can be converted to *.wvf Waveform data files (*.wvf, *.wdf) can be converted to *.fld |
| Waveform Computation (available only with the Math option) | Max. Number of displayed waveforms (CHs) 32 waveforms (Math1 to Math32) |
| Computation Accuracy (resolution) | Single floating point number |
| Operations | +, -, ×, /, Phase Shift, ABS, SQRT, LOG, EXP, RMS, NEG, SIN, COS, TAN, ATAN, PH, DIF, DDIF, INTG, IINTG, BIN, P2, P3, F1, F2, FV, PWHH, PWHL, PWLH, PWLL, PWXX, DUTYH, DUTYL, FLT1, FLT2, HLB, MEAN, LS, RS, PS, PSD, CS, TF, CH |
| FFT Points | Max. 2 M points |
| FFT Window | Rect, Hanning and Flat top |
| Digital Filter | Gauss, Sharp, IIR |
| Max. Number of computed points | 12.5 M points (depends on the number of Math channels) |

¹ When opening data files with specific sample rate combinations of the multi-sample rates feature, some channels may not load.

² Will be supported by the future update.

IS8000 Edition, License and Features

| Features | Integrated Software Platform ^{*1} | | Classic Data Viewer | IEC Harmonic/Flicker |
|---|---|--|-----------------------|--|
| | IS8001 (Annual) ^{*2} IS8002 (Perpetual) ^{*2} | Simple (free) edition | IS8002CDV (Perpetual) | IS8011 (Annual) IS8012 (Perpetual) |
| Data file import/export | | | | |
| WDF/WVF files (Measurement data of YOKOGAWA oscilloscope/Scopecoder) | Import only | Import only | Import/Export | Import only |
| CSV files (Measurement data of YOKOGAWA oscilloscope/Scopecoder) | Import/Export | Import/Export | Import/Export | Import/Export |
| CSV files (saved on WT1800 series, WT3000 series, WT5000) | Import only | Import only | | Import only |
| MF4 files (IS8000 measurement data) and IS8000 project files | Import/Export | Import only | | Import only |
| CSV batch conversion | ✓ | | ✓ | |
| MAT files (MATLAB format) | | | Import/Export | |
| CSZ files (CSV files compressed in zip format) | Import/Export | | | |
| Online data acquisition | | | | |
| Real-time data acquisition with DL950 (Include connection of 10 GbE) | ✓ | | | |
| Monitoring, real-time data acquisition with WT5000 | More than 9 items | Up to 8 items, Save function not available | | Up to 8 items, Save function not available |
| WT5000 data streaming function (DS) support | ✓ | | | |
| Application Programming Interface for External Control and Extension | ✓ | | | |
| Remote control | | | | |
| Remote control and cached data import with DL950 via 10 GbE connection | ✓ | | ✓ | |
| Remote control and cached data import with DL950 via 1 GbE/USB | ✓ | | ✓ | |
| Remote control with WT5000 via 1 GbE/USB | ✓ | ✓ | | ✓ |
| Remote control and cached data import with other DL/DLM series via 1 GbE/USB (data import not available) | ✓ | | ✓ | |
| Remote control, monitoring and real-time data acquisition for up to 5 devices | SY1 option | | | |
| File manager | | | | |
| Transfer saved file from DL350, DL850 series, DL950, DLM3000, DLM5000 | ✓ | | ✓ | |
| Analysis | | | | |
| Combining, overlaying and separation of multiple measurement waveforms | ✓ | | | |
| Max. number of display channels | 128 channels × 16 Gr. | 8 channels × 1 Gr. | 90 channels × 10 Gr. | 8 channels × 1 Gr. |
| Max. number of zoom screens/Max. number of X-Y screens | 4 screens/2 screens | 1 screen/1 screen | 1 screen/1 screen | 1 screen/1 screen |
| Cursor measurement/Display history data and dual capture data | ✓ | ✓ | ✓ | ✓ |
| Automatically measure waveform parameters/Inserting annotations/Automated measurement of history/cycle statistics | ✓ | | ✓ | |
| Inter-channel calculation/FFT analysis | MH1 option | | Math option | |
| Power numeric display | 4 to 32 values × 2 screens | 4 or 8 values × 1 screen | | 4 or 8 values × 1 screen |
| Harmonic bar graph display | Bar panel × 6 screens | Bar panel × 1 screen | | Bar panel × 1 screen |
| Report generator function | RP1 option | | | |
| Synchronized measurement between DL950 and video files/High-speed camera | FS1 option | | | |
| Synchronized measurement between DL950 and ECU monitor | EM1 option | | | |
| Serial Bus (CAN bus) Analysis | SB1 option | | | |
| Simultaneous Measurement with Modbus/TCP Communication Devices | MB1 option | | | |
| IEC Harmonic/Flicker testing (WT5000 with G7 option required) | | | | |
| IEC Harmonic/Flicker testing, judgement and report creation with WT5000 | | | | ✓ |
| Display and save the results of harmonic measurement in accordance with IEC | ✓ | ✓ | | ✓ |

^{*1} After 30 days have passed since you started to use the trial version without activation or the annual license has expired, the software will switch to the simple (free) edition.

^{*2} Classic Data Viewer is available at no extra charge on PCs with a valid IS8001/IS8002 license activated.

^{*3} Math function of Classic Data Viewer is available at no extra charge on PCs with a valid IS8001/IS8002 license activated.

IS8000 Application Programming Interface (API)

IS8000 API is a framework that enables acquiring data from measurement instruments not supported by the IS8000 Integrated Software Platform and controlling the IS8000 from user software. The following 3 types of APIs are available.

Control API

Enables user development software or external systems to control the IS8000 and acquire data

DAQ SDK (Plugin)

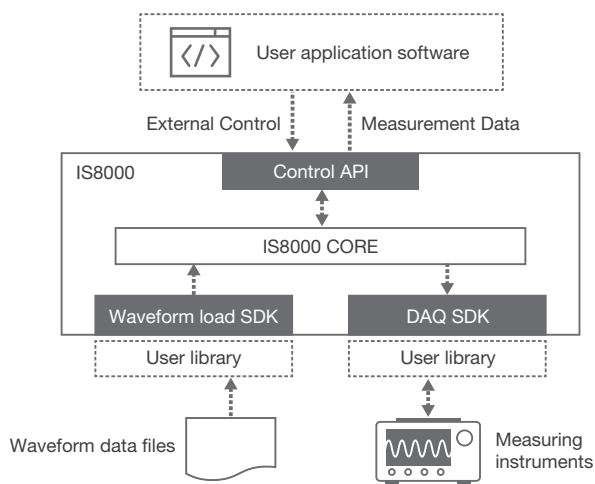
Enables users to create a library to acquire data from measuring instruments not supported by the IS8000 on the IS8000

Waveform load SDK (Plugin)

Enables users to create a library to import data from waveform data files not supported by the IS8000 into the IS8000.

Please refer to the API manual for details.

The IS8000 API Software Development Kit is available for free. A valid IS8001/IS8002 purchase license is required to use the API.



Model and Suffix Code

IS8000 Integrated Software Platform

| Model | Suffix Code | Description |
|--------|-------------|---|
| IS8001 | | IS8000 Integrated Software Platform Subscription (Annual license) |
| IS8002 | | IS8000 Integrated Software Platform Perpetual (Permanent license) |
| | /SY1 | Multi-Unit Synchronization Option |
| | /MH1 | Waveform Math Option |
| | /RP1 | Report Generator Option |
| | /FS1 | High-speed Camera Synchronization Option |
| | /EM1 | ECU Monitor Synchronization Option |
| | /SB1 | Serial Bus Analysis Option |
| | /MB1 | Modbus/TCP Communication Option |

Add-on Packages

| Model | Suffix Code | Description |
|----------|-------------|---|
| IS8001EX | | IS8000 Add-on Package Subscription (Annual license) |
| IS8002EX | | IS8000 Add-on Package Perpetual (Permanent license) |
| | -SY1 | Multi-Unit Synchronization |
| | -MH1 | Waveform Math |
| | -RP1 | Report Generator |
| | -FS1 | High-speed Camera Synchronization |
| | -EM1 | ECU Monitor Synchronization |
| | -SB1 | Serial Bus Analysis |
| | -MB1 | Modbus/TCP Communication |

IS8010 IEC Harmonic/Flicker Measurement Software

| Model | Suffix Code | Description |
|--------|-------------|---|
| IS8011 | | IEC Harmonic/Flicker Software Subscription (Annual license) |
| IS8012 | | IEC Harmonic/Flicker Software Perpetual (Permanent license) |

IS8002CDV Classic Data Viewer

| Model | Suffix Code | Description |
|-----------|-------------|-------------------------------|
| IS8002CDV | | Classic Data Viewer Perpetual |
| | -P01 | Standard Function for 1 PC |
| | -P05 | Standard Function for 5 PCs |
| | -P10 | Standard Function for 10 PCs |
| | -P20 | Standard Function for 20 PCs |
| | /M01 | Math Function for 1 PC |
| | /M05 | Math Function for 5 PCs |
| | /M10 | Math Function for 10 PCs |
| | /M20 | Math Function for 20 PCs |

Classic Data Viewer is available at no extra charge on PCs with a valid IS8001/IS8002 license activated.

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YMI-N-MI-M-E03

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[Ed: 03/b] Printed in Japan, 409(KP)

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