



# DCS-100A Optional Software



Optional software provides various additional functions.

**Simultaneous Acquisition of Video and Numeric Data/Arithmetic Operations/FFT Analysis Optional Software**

## DCS-101A

- Records video using a webcam
- Records video as memo while measuring
- Real-time processing of the basic arithmetic calculations
- Real-time monitoring of the FFT analysis

**GPS Data Acquisition Optional Software**

## DCS-104A

- Monitors and acquires the positioning data, received from GPS receivers which is connected to the PC, simultaneously with measurement data.
- Saves the acquired GPS data as a separate file having the same names as the measurement data. (Extension: NMEA)

**CANdb File Read Optional Software**

## DCS-105A

- Sets CAN conditions of DCS-100A by reading CANdb file.

**1000-channel for UCAM-550A**

**Optional Software**

## DCS-106A

- Measures 1000-channel data.

Optional software chart

| Software | EDX-5000A | EDX-100A | EDX-200A | EDX-10 Series | PC4-400 Series | UCAM-550A | NTB-500C | CTRS-100 Series |
|----------|-----------|----------|----------|---------------|----------------|-----------|----------|-----------------|
| DCS-100A | Yes       | Yes      | Yes      | Yes           | Yes            | Yes       | Yes      | Yes             |
| DCS-101A | Yes       | Yes      | Yes      | Yes           | Yes            | Yes       | Yes      | Yes             |
| DCS-104A | Yes       | Yes      | Yes      | Yes           | Yes            | Yes       | Yes      | Yes             |
| DCS-105A | Yes       | Yes      | Yes      | Yes           | Yes            | Yes       | Yes      | Yes             |
| DCS-106A |           |          |          |               | Yes            |           |          |                 |

## DCS-101A Specifications

|                                                                                                                     |                                                                                                                                                                                               |
|---------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>System Requirements</b>                                                                                          |                                                                                                                                                                                               |
| OS                                                                                                                  | Windows® 10, Windows® 11<br>English/Japanese, 32/64 bits support (64-bit only for Windows® 11)<br>For the 64-bit OS, WOW64 system (Windows 32-bit On Windows 64-bit)<br>Core i5 2 GHz or more |
| CPU                                                                                                                 | For recording moving images and conducting arithmetic operations simultaneously, you need Core i5 3 GHz or higher CPU.                                                                        |
| Memory                                                                                                              | For the 32-bit OS, 2 GB or more.<br>For the 64-bit OS, 4 GB or more.                                                                                                                          |
| Display                                                                                                             | Resolution: 1024x768 dots or more                                                                                                                                                             |
| <b>Recording Moving Image</b>                                                                                       |                                                                                                                                                                                               |
| ■Recording Moving Image                                                                                             |                                                                                                                                                                                               |
| Applicable Camera                                                                                                   | DirectX-compatible web camera<br>(Web camera the OS can recognize as an imaging device.)                                                                                                      |
| Number of Applicable Cameras                                                                                        | 1                                                                                                                                                                                             |
| Resolution/Size                                                                                                     | Up to 640 x 480                                                                                                                                                                               |
| Frame Rate                                                                                                          | Up to 30 fps                                                                                                                                                                                  |
| Saving File Format                                                                                                  | AVI format                                                                                                                                                                                    |
| Number of Moving Image Capture Window Available on Display                                                          | 1                                                                                                                                                                                             |
| Operation                                                                                                           | Monitors/records the moving image data while measuring data.<br>Zoom                                                                                                                          |
| *Resolution/Size and frame rate varies with the camera.                                                             |                                                                                                                                                                                               |
| ■Measuring Conditions while Recording Moving Image                                                                  |                                                                                                                                                                                               |
| <b>Target Measuring Instruments</b>                                                                                 |                                                                                                                                                                                               |
| EDX-100A, EDX-200A, EDX-10B,<br>UCAM-550A, NTB-500C,<br>PCD-400 series, EDX-5000A, CTRS-100A                        |                                                                                                                                                                                               |
| <b>Measure Mode</b>                                                                                                 |                                                                                                                                                                                               |
| When the Data Save Folder is PC: Manual,<br>Manual (Set Record Data)                                                |                                                                                                                                                                                               |
| When the Data Save Folder is measuring<br>instruments: Manual, Manual (Set Record Data),<br>Trigger                 |                                                                                                                                                                                               |
| *Practical measuring conditions, which can be set, are limited by the measuring instruments.                        |                                                                                                                                                                                               |
| ■Reproducing Moving Image                                                                                           |                                                                                                                                                                                               |
| Reproducible File Format                                                                                            | AVI format                                                                                                                                                                                    |
| Number of Simultaneous Reproducible Files                                                                           | 1                                                                                                                                                                                             |
| <b>Number of Moving Image Window Available on Display</b>                                                           |                                                                                                                                                                                               |
| 1                                                                                                                   |                                                                                                                                                                                               |
| <b>Operations</b>                                                                                                   |                                                                                                                                                                                               |
| Reproduce, Stop, Pause,<br>Frame-by-frame forward,<br>Frame-by-frame backward, Zoom,<br>Changing reproduction speed |                                                                                                                                                                                               |
| <b>Synchronized Cursor</b>                                                                                          |                                                                                                                                                                                               |
| Reproduces the moving images and<br>graphs with cursors synchronized.                                               |                                                                                                                                                                                               |

## Arithmetic Operations

### ■Arithmetic Operations

Number of Calculation Channels Up to 32

\*Up to 64 (EDX-5000A)

### Calculation Channel Conditions

Calculation ON/OFF, Formula (within 200 characters), Unit, Deci Digits, Channel name (within 40 characters), Calculating ZERO, ZERO value

### Printing

Prints/previews the calculation channel conditions

### Loading/Saving

Loads/saves the calculation channel conditions as the calculation channel conditions file.

Loads/saves the matrix conditions as the condition file (CSV format file).

### Operation

Monitors/records the calculation channel data together with the measured data.

Saves the calculation channel data in the same format as the measured data (KS2 format file).

### ■Formulas

#### Channels

Measuring channels and calculation channels

#### Operators and Constants

+ , - , \* , / , ^ , P , ( , )

#### Functions

|      |                                      |      |                                     |
|------|--------------------------------------|------|-------------------------------------|
| SQR  | Square root function                 | LOG  | LOG function (common logarithm)     |
| ABS  | Absolute value function              | LN   | LN function (natural logarithm)     |
| SIN  | SIN function                         | EXP  | EXP function (exponential)          |
| COS  | COS function                         | HMAX | Maximum principal strain function   |
| TAN  | TAN function                         | HMIN | Minimum principal strain function   |
| ASIN | ASIN function (Return value: Radian) | HGM  | Maximum shear strain function       |
| ACOS | ACOS function (Return value: Radian) | SMM  | Minimum principal stress function   |
| ATAN | ATAN function (Return value: Radian) | SMM  | Minimum principal stress function   |
| DSIN | DSIN function (Return value: Angle)  | SSM  | Maximum shear stress function       |
| DCOS | DCOS function (Return value: Angle)  | DEG  | Principal strain direction function |
| DTAN | DTAN function (Return value: Angle)  |      |                                     |

### ■Measuring Conditions while Arithmetic Operations

#### Target Measuring Instruments

|                                                                                              |
|----------------------------------------------------------------------------------------------|
| EDX-100A, EDX-200A, EDX-10B,<br>UCAM-550A, NTB-500C, PCD-400 series,<br>EDX-5000A, CTRS-100A |
|----------------------------------------------------------------------------------------------|

#### Data Save Folder

PC folder

\*Saves in the EDX-5000A data drive

#### Measure Mode

Manual, Manual (Set Record Data), Interval,  
Analog Trigger

#### Sampling Frequency

Up to 10 kHz

\*Practical measuring conditions, which can be set, are limited by the measuring instruments.

### ■Others

Arithmetic operations are not available when measuring the CAN data with the EDX-100A/EDX-200A.

### FFT Analysis

#### ■FFT Analysis

Analysis Type

|                                                                                            |
|--------------------------------------------------------------------------------------------|
| Linear spectrum, power spectrum,<br>cross spectrum, auto correlation,<br>cross correlation |
|--------------------------------------------------------------------------------------------|

#### Number of Analysis Data

256, 512, 1024, 2048, 4096, 8192

#### Window Function

Square, humming, hanning, fejer,  
blackman, gaussian

#### Number of Analysis Channels

Up to 4 channels/window  
Up to 8 windows/display

#### Analysis Result Graphs

| Analysis Type     | Analysis Result Graphs                               |
|-------------------|------------------------------------------------------|
| Linear spectrum   | Amplitude (linear)<br>Amplitude (logarithm)<br>Phase |
| Power spectrum    | Amplitude (linear)<br>Amplitude (logarithm)          |
| Cross spectrum    | Amplitude (linear)<br>Amplitude (logarithm)<br>Phase |
| Auto correlation  | Correlation                                          |
| Cross correlation | Correlation                                          |

#### Saving

Saves the analysis results as the DAS-200A  
FFT analysis result file (CSV format file).

### ■Measuring Conditions while FFT Analysis

#### Target Measuring Instruments

|                                                                                |
|--------------------------------------------------------------------------------|
| EDX-100A, EDX-200A, EDX-10B, NTB-500C,<br>PCD-400 series, EDX-5000A, CTRS-100A |
|--------------------------------------------------------------------------------|

\*Practical measuring conditions, which can be set, are limited by the measuring instruments.

## DCS-104A Specifications

### ■Operating Environment

|         |                                                                                                                                       |
|---------|---------------------------------------------------------------------------------------------------------------------------------------|
| OS      | Windows® 10<br>English/Japanese, 32/64 bits support<br>If 64-bit OS, operate in WOW64 (Windows 32-bit On Windows 64-bit) environment. |
| CPU     | Core i5 2 GHz or advanced                                                                                                             |
| Memory  | If 32-bit OS, 2 GB or more<br>If 64-bit OS, 4 GB or more                                                                              |
| Display | Resolution: 1024x768 pixels or more                                                                                                   |

### ■GPS Data Acquisition

|                  |                                                                                                                                                                                                    |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GPS Data Display | During monitoring and acquisition,<br>arbitrary selection of latitude, longitude,<br>direction of movement, speed, reception status,<br>and number of received satellites for display is possible. |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### GPS Data File Formats

NMEA-0183 (Extension: NMEA)  
In the same folder as the acquisition data  
KS2 files, these are saved as a separate file  
with the same name as the KS2 file.

### ■Applicable GPS Receivers

|                             |                                                                                                                                                                                                                  |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Interface                   | RS-232C or USB connection (If USB connection,<br>then a USB-RS port converter driver enables<br>equivalent RS-232C connection)<br>If the PC does not have a COM port, then use a<br>RS-USB conversation adapter. |
| Output Format               | NMEA-0183                                                                                                                                                                                                        |
| Geographical Coordinates    | WGS-84                                                                                                                                                                                                           |
| Connected Units             | 1                                                                                                                                                                                                                |
| Models Confirmed to Operate | HOLUX Comet USB/4<br>SanJose Antares 7/RS                                                                                                                                                                        |

### ■Measuring Conditions

|                        |                                                                                                                                               |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Applicable Instruments | PCD-400 series, EDX-10B, EDX-100A,<br>EDX-200A                                                                                                |
| Measuring Modes        | Saved in the PC.<br>Manual, manual (Data points preset)<br>Saved in the measuring instrument.<br>Manual, manual (Data points preset), trigger |
| Sampling Frequencies   | Max. 10 kHz                                                                                                                                   |

## DCS-105A Specifications

### ■Operating Environment

|         |                                                                                                                                                                                  |
|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OS      | Windows® 10, Windows® 11<br>English/Japanese, 32/64 bits support (64-bit only for Windows® 11)<br>If 64-bit OS, operate in WOW64 (Windows 32-bit On Windows 64-bit) environment. |
| CPU     | Core i5 2 GHz or advanced                                                                                                                                                        |
| Memory  | If 32-bit OS, 2 GB or more<br>If 64-bit OS, 4 GB or more                                                                                                                         |
| Display | Resolution: 1024x768 pixels or more                                                                                                                                              |

### ■LOADING CANdb FILE

Loads the CANdb file and sets the DCS-100A CAN conditions.  
Number of messages that can be load: 2048  
(Only CTRS-CAG010A supports CAN FD)

#### Target Measuring Instruments

EDX-100A, EDX-200A, EDX-5000A, CTRS-100 series

#### Target Conditioner Card

CAN-41A

#### Target Optional Card

ECAN-40A (optional card for the EDX-200A)  
EGPC-40A (optional card for the EDX-200A)  
EGPC-50A (GPS / Multi channel CAN Module)

#### Expansion Unit

CTRS-CAG010A (CAN unit)

## DCS-106A Specifications

### Applicable Instruments

|                                                                       |                                                                                                                                                                                  |
|-----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Applicable Instruments</b> UC486-550A                              |                                                                                                                                                                                  |
| <b>OS</b>                                                             | Windows® 10, Windows® 11<br>English/Japanese, 32/64 bits support (64-bit only for Windows® 11)<br>If 64-bit OS, operate in WOW64 (Windows 32-bit On Windows 64-bit) environment. |
| <b>CPU</b>                                                            | Core i5 2.6 GHz or advanced                                                                                                                                                      |
| <b>Memory</b>                                                         | If 32-bit OS, 2 GB or more<br>If 64-bit OS, 4 GB or more                                                                                                                         |
| <b>Display</b>                                                        | Resolution: 1024x768 pixels or more                                                                                                                                              |
| <b>Number of Acquisition Channels</b>                                 |                                                                                                                                                                                  |
| Enables UCAM-550A (20 units) to perform measurement in 1000 channels. |                                                                                                                                                                                  |

