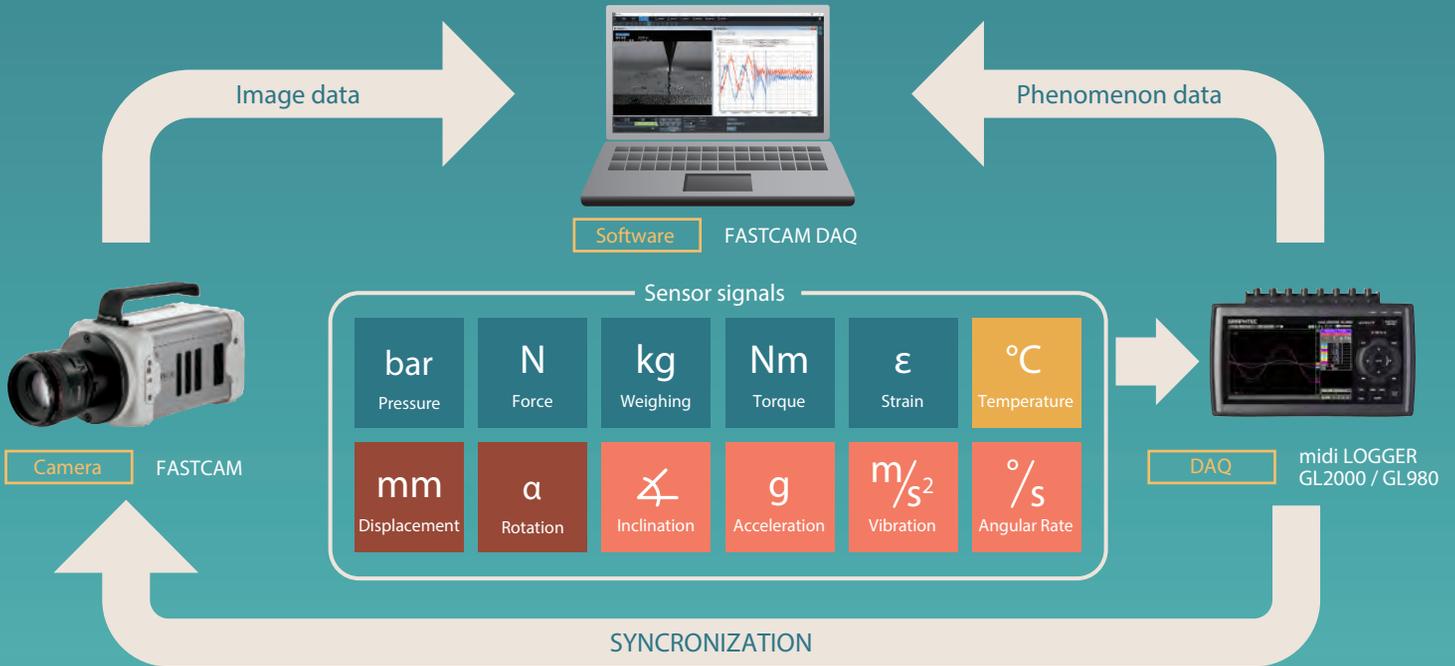# GRAPHTEC

Synchronization System
for Analog Signals and Images

Visualize the phenomenon of the moment that cannot be captured by the human eye.
It is effective in understanding what is happening in the moment with both slow-motion image and sensing value.

Image data →

Software   FASTCAM DAQ

← Phenomenon data

Camera   FASTCAM

Sensor signals

bar — Pressure	N — Force	kg — Weighing	Nm — Torque	ε — Strain	°C — Temperature
mm — Displacement	α — Rotation	∡ — Inclination	g — Acceleration	m/s^2 — Vibration	°/s — Angular Rate

DAQ   midi LOGGER GL2000 / GL980

SYNCRONIZATION

Settings/Recordings

Automatic connection
Synchronization of setting with one button operation.

Video
Sync
Waveform

Trigger from data logger
Recording can be started from the level of threshold set on data logger.

Various sensors
Trigger

Playback/Analysis

Instant preview
Preview the video and waveform immediately without any complicated operation.

Waveform and video are linked
The video is played back in conjunction with the time axis of the waveform data.

Management/Effort

Auto-saved to the same folder
Automatically save both date from camera and data logger to specified locations.

Composite output of waveform and videos
Composite output of waveforms and video data into a general purpose video file.

Immediate preview

Examples of Application

Welding

Imaging
• Scattering of sputtering
• Change of the arc
• Melting pool

Measuring signal
• Current (A)
• Voltage (V)

Benefits
• Improvement of welding defect setting
• Shortening the time of conditioning

Combustion

Imaging
• Spray shape
• Spark behavior of the spark plug
• flame propagation

Measuring signal
• Cylinder pressure (Pa)
• Injection / ignition timing (T)

Benefits
• Analysis of abnormal combustion
• Comparison with CAE

Shock Test

Imaging
• Deformation
• Destruction

Measuring signal
• Acceleration (m/s^2)
• Load (N)

Benefits
• Analysis of the origin of destruction
• Comparison with CAE

Data Logger

midi LOGGER GL980

- 8ch High speed 1MS/s simultaneous sampling
- Includes 500 V measurement with 16-bit A/D converter
- Equipped with true-rms measurement
- Large easy-to-read 7-inch LCD
- Supports large built-in RAM(4MS/ch) and built-in Flash(4GB)

midi LOGGER HV GL2000

- 4ch High speed 1MS/s simultaneous sampling
- CAT Ⅲ 600 V Compatible
- Measure AC 600 V true-rms measurement
- Large easy-to-read 7-inch LCD
- Supports large built-in RAM(4MS/ch) and built-in Flash(4GB)

☑ Captured data can be directly saved in GBD format

DATA

☑ Standalone design with LCD display makes perfect fit with on-site data verification and setting adjustment without PC
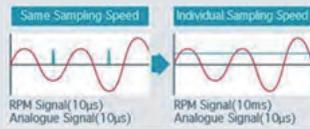
7inch

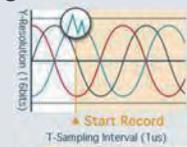☑ Supports AC/ DC/ Battery operation that can be used in anywhere

3WAY

☑ Never miss out the multiple high-speed incidents by using the memory division function.
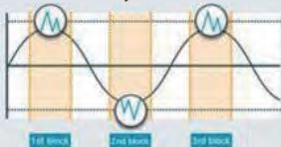
☑ Sampling interval for analog channel and pulse input (RPM) can be set separately

☑ Accomplish the high-quality measurement with high speed (1us) and high resolution (16 bits).

High-speed camera Line-up

FASTCAM series	Nova S series	Nova R2	SA-Z	Mini AX	Mini WX	Mini UX	MH6
Resolution (pixels)	1024 x 1024	2048 x 2048	1024 x 1024	1024 x 1024	2048 x 2048	1280 x 1024	1920 x 1400
Frame Rate (fps)	16,000	1,440	20,000	6,400	1,080	4,000	750
Max. Speed (fps)	1,100,000	100,000	2,100,000	900,000	80,000	800,000	10,000

Option Items

FASTCAM DAQ
PFV Add on software
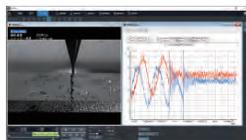
LW-100 (R6)
Synchronization cable