



## High-speed Data Streaming

Continuous gap-free storing of up to 160 MS/s (= 305 MB/s)

More and more applications require high sampling rates, but due to computer processing and bus limitations, in the past, special AD cards with large on board memories had to be used, and with these 'scope-like' cards, only triggered blocks of data could be captured, so if the trigger was not set correctly the event could be lost for ever!

All DEWETRON instruments are able to acquire 5 GB/minute continuously, and dedicated DEWETRON transient systems can capture up to 17 GB/minute, where only the disk size is the limitation of your recording length. Triggering can be set, but to ensure you don't miss your one time event, you simply press the RECORD button and after the event, STOP recording, and zoom into the area of interest. Carefree data acquisition is what we call it.

All these systems offer either a direct voltage input, or a range of isolated amplifiers, including the HSI series with HSI-LV (low voltage), HSI-HV (high voltage), HSI-STG (strain gauge), providing an analog bandwidth of up to 2 MHz, to support high speed applications.

### Key Features

- Sampling rates up to 160 MS/s
- Almost unlimited recording length
- Isolated amplifiers with 2 MHz bandwidth
- Post processing options
- Export to different file formats (.txt, .mat, .xls)
- Easy to use software

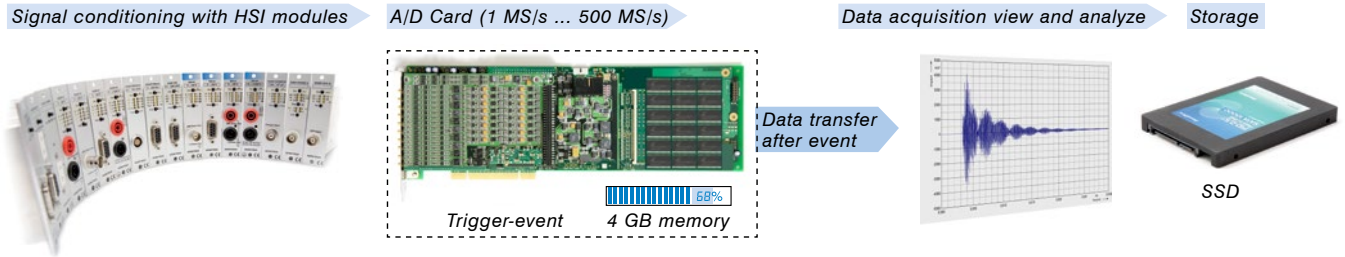
### Applications

- Power train
- Paper mill
- Combustion engine
- Belt drive
- Engine test bench
- Power plant testing and monitoring
- Examination of rotating field
- High voltage equipment

# System Architecture

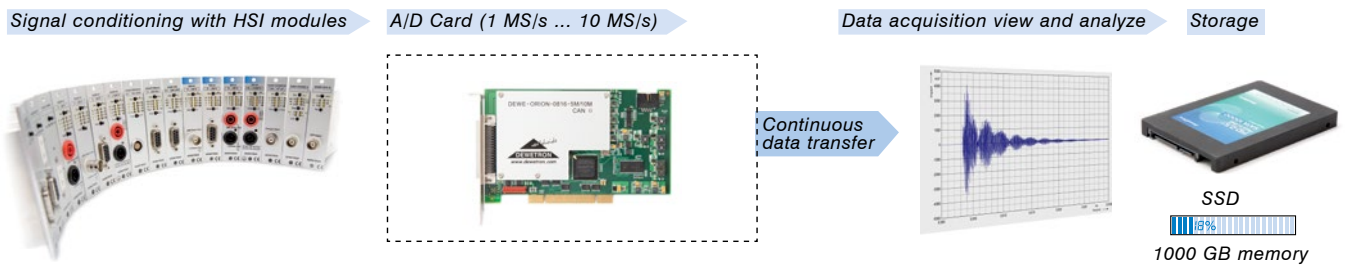
## Classical transient recorder:

Acquisition with triggered start on AD card. Recording length is limited by AD card memory.



## Stream machine:

“Long time” acquisition and capturing direct to SSD memory.



Module	Input type	Ranges	TEDS	Bandwidth (BW), Filters (LP = lowpass, HP = highpass)	Isolation (ISO), Overvoltage protection (OP)
<b>Universal measurement</b>					
<b>HSI-STG</b> 	Strain gauge, bridge sensors	$\pm 0.1$ to $\pm 1000$ mV/V (@ 5 VDC <sub>exc</sub> )	✓	BW: up to 2 MHz LP: 100 Hz to 2 MHz HP: 1 Hz	ISO: 350 V <sub>DC</sub> OP: $\pm 50$ V <sub>DC</sub>
	Piezoresistive bridge	$\pm 0.5$ to 10000 mV/mA (@ 1 mA <sub>exc</sub> )			
	Voltage	$\pm 500$ $\mu$ V to $\pm 10$ V			
	Resistance	25 m $\Omega$ to 100 k $\Omega$			
	Pt100, Pt200, Pt500, Pt1000, Pt2000	-200° C to 850° C			
	IEPE® via MSI-BR-ACC	$\pm 100$ to $\pm 10000$ mV			
	Thermocouple via MSI-BR-TH-x	full range of TC type			
Charge via MSI-BR-CH-50	up to 50000 pC				
Voltage via MSI-BR-V-200	up to $\pm 200$ V				
<b>High voltage measurement</b>					
<b>HSI-HV</b> 	High voltage	$\pm 20$ to $\pm 1400$ V	-	BW: 2 MHz LP: 100 Hz to 2 MHz	ISO: 1.8 kV <sub>RMS</sub>
<b>Voltage &amp; current measurement</b>					
<b>HSI-LV</b> 	Voltage	$\pm 10$ mV to $\pm 50$ V	✓	BW: 2 MHz LP: 100 Hz to 2 MHz	ISO: up to 1 kV <sub>RMS</sub> OP: 350 V <sub>DC</sub>
	Current with external shunt	20 mA / 5 A			
	IEPE® via MSI-V-ACC	$\pm 10$ mV to 5 V			
	Pt100, Pt200, Pt500, Pt1000, Pt2000 and resistance via MSI-V-RTD	-200° C to 1000° C and 8 to 4 k $\Omega$			



**DEWE-2600**  
160 MS/s gap free storing

NEW  
DEWE2

Dedicated Instruments

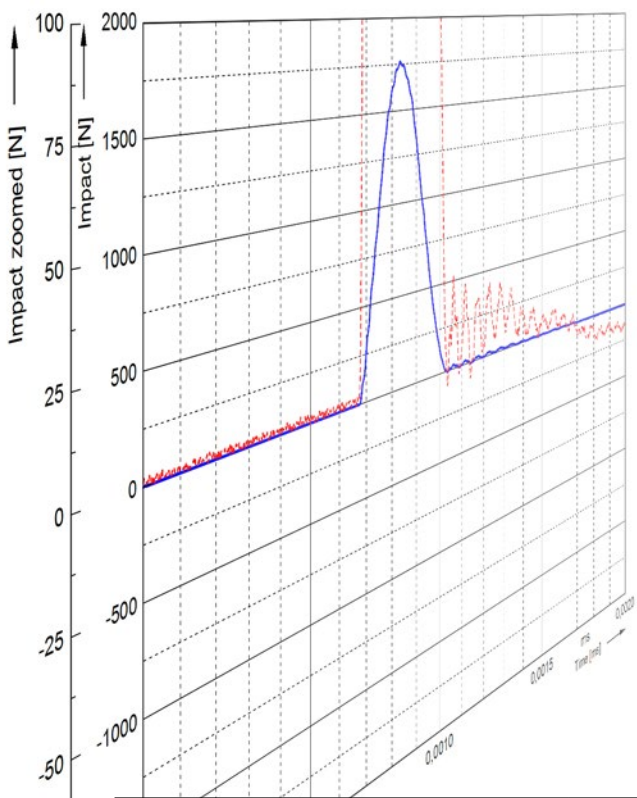
Instruments

Front-ends

Signal Conditioning

Components

Software



**DEWE-800**  
40 MS/s gap free storing

	System performance [MS/s]	Max. channels (16 bit)	Max. sampling rate/channel [MS/s]	A/D Cards	Typical recording time
DEWE-2600-STREAM-1	90	16	1	1	3.5 h
DEWE-2600-STREAM-5		160	5	2	45 min
DEWE-2600-STREAM-10		160	10	2	22 min
DEWE-2600-STREAM-30		160	30	1	60 min
DEWE-2600-STREAM-30		160	25	1	48 min
DEWE-2600-STREAM-30		160	20	1	45 min
DEWE-800-STREAM-1	40	16	1	1	8.5 h
DEWE-800-STREAM-5	40	8	5	1	3.5 h
DEWE-800-STREAM-10	40	4	10	1	3.5 h
DEWE-800-STREAM-30	40	1	30	1	4.5 h
DEWE-800-STREAM-30	40	2	20	1	3.5 h
DEWE-800-STREAM-30	40	4	10	1	3.5 h



## Ballistic and Ammunition Testing

Weather station  
wind speed/direction  
barometric pressure  
ambient temperature

Quartz Sensor for  
Ballistic Pressure  
Measurement

The software provides ready to use templates which makes it easy to setup the measurement within a few minutes.

DEWE-3020 with direct sensor input

bar

3000  
2000  
1000  
500  
0

ms

- Cartridge pressure
- Case mouth measurement
- Conformal pressure
- Port pressure

## Cavitation Testing

To verify cavitation in the coolant, sampling rates of 3-5 MS/s are necessary. The possibility to store data for a long duration, as well as the possibility to store other parameters like cylinder pressure, will give the user a huge benefit in the analysis.

