

DEWE-43A

Award-winning USB Instrument



NEW: with isolated power supply

8 ANALOG INPUTS

- Multi-sensor input for Voltage, Bridge, IEPE, Temperature, Charge
- Simultaneous sampling
- 200 kHz/channel
- 24 bit, alias-free
- 10 V, 1 V, 100 mV, 10 mV ranges (200 V with MSI adapter)
- ± 5 V, 12 V sensor supply
- Isolated power supply as standard

8 COUNTER INPUTS 24 DIGITAL INPUTS

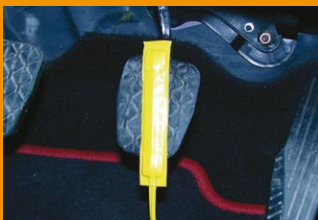
- Counting, Waveform timing, Encoder, Tacho and Geartooth sensors
- Digital inputs
- Fully synchronized with analog data

2 CAN BUS PORTS

- optical isolation
- Vehicle CAN, OBDII, J1939
- CAN sensors support
- CAN 2.0b up to 1 MBit/sec

DEWESoft™

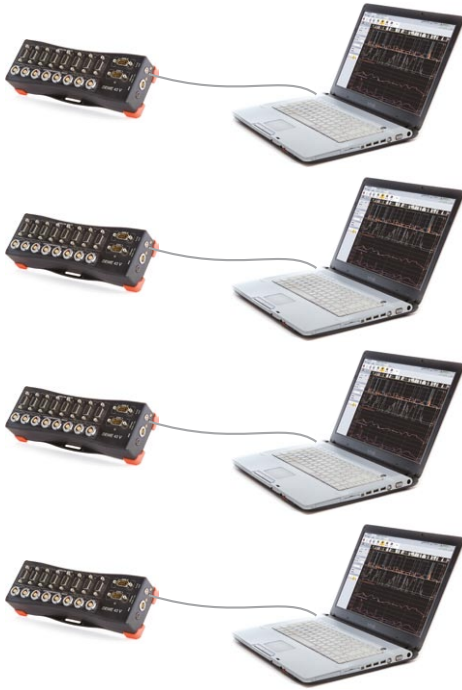
- DEWESoft X included
- Synchronous data acquisition of different sources
- Full support of DEWE-43A, GPS and video camera



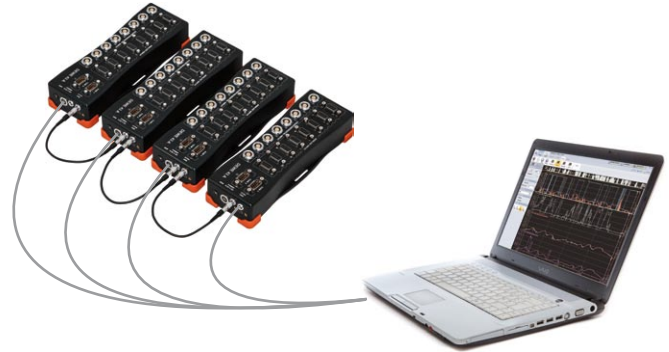
DEWE-43A system configurations

ANY combination up to 32 analog, 32 counter and 8 CAN bus channels.

4 x 8 channel systems



1 x 32 channel system



8 MS/s total = 40 AI channels @ 200 kS/s

DEWE-43 + DS-NET= Ethernet DAQ System

Mixed signal data acquisition

Dewesoft system:

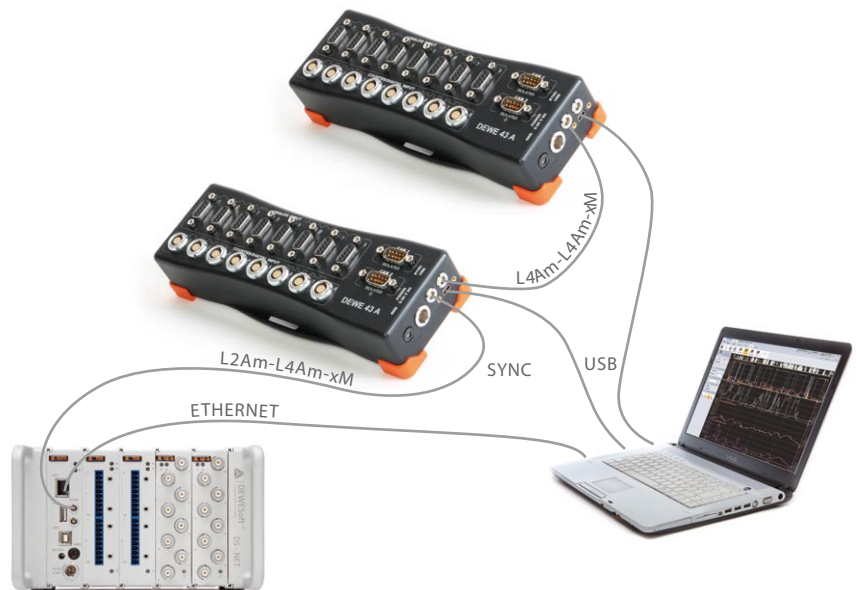
16 channel fast 200 kS/s, 24 bit each channel, 2 x DEWE-43A:

- For ACC vibration sensors
- 16 channel smart counter inputs
- 4 CAN bus

32 channel slow 2 kS/s, 24 bit each channel, 1 DS-NET system

- Mixed signals isolated inputs

With DEWESoft™ user interface












DEWE-43A

TECHNICAL SPECIFICATIONS

ANALOG INPUT		
Number of channels	8 (simultaneously sampled)	
Measured values	Voltage, full bridge (IEPE, charge, thermocouple and RTD with MSI adapters)	
Resolution	24-bit	
Type of ADC	Sigma-Delta with anti-aliasing filter	
Sampling rate	200 kS/s	
-3 dB bandwidth	76 kHz @ 200 kS/s	
AMPLIFIER CHARACTERISTICS		
Input ranges	Voltage	1mV/V; 10mV/V; 100mV/V; 1000mV/V
	Voltage via MSI-V200	up to ± 200 V
	Full bridge	± 10 mV/V, ± 100 mV/V, ± 1000 mV/V
	Half or quarter bridge	With external bridge completion
	IEPE via MSI-ACC	± 0.1 V, ± 1 V, ± 10 V
	Thermocouple via MSI-THx	Full range of thermocouple type (isolated thermocouple only)
	Pt100, Pt200, Pt500, Pt1000, Pt2000 and resistance via MSI-RTD	-200°C to 1000°C and 0 to 6.5 kOhm
DC accuracy	10 V range: 0.1 % of value, +1 mV 1 V range: 0.1 % of value, +0.5 mV 100 mV range: 0.1 % of value, +0.1 mV 10 mV range: 0.1 % of value, +0.1 mV	
Input impedance	10 M Ω 33 pF (common mode), 20 M Ω 47 pF (differential mode)	
CMRR	>80 dB	
Sensor supply voltage	± 5 V 0.1 % @ 100 mA, 12 V @ 400 mA per channel	
Voltage mode coupling	DC	
Input overvoltage protection	± 70 V	
DYNAMIC CHARACTERISTICS		
Signal to noise @ $f_s < 1000$ Hz	< -100 dB	
Crosstalk	< -100 dB	
COUNTER/DIGITAL INPUTS		
Number of channels	8 counters or 24 digital inputs (per software each counter can be selected to be 3x digital input)	
Counter modes	Event counting, encoder input, period, pulsewidth, duty cycle, frequency measurement	
Resolution	32-bit	
Time base	102.4 MHz	
Signal levels	TTL/CMOS	
Input voltage protection	30 V	

CAN PORTS	
Number of channels	2 (optically isolated)
Specification	CAN 2.0b up to 1MBit/s
Physical layer	High speed
ENVIRONMENTAL	
Operating temperature	-20 to 50°C
Storage temperature	-20 to 70°C
Relative humidity	10 to 90 %
Vibration	MIL-STD 810F 514.5, procedure I
Shock	MIL-STD 810F 516.5, procedure I
PHYSICAL	
Dimensions (L x W x H)	223 x 78 x 45 mm (7.78 x 3.08 x 1.77 inch)
Weight	0.72 kg (1.58 pounds)
POWER REQUIREMENTS	
Supply voltage	6 to 36 V _{DC}
Supply overvoltage protection	80 V
Negative input voltage protection	-30 V
Typical power consumption	5 W
Maximum sensor consumption	6 W
SYSTEM REQUIREMENTS	
Operating system	Microsoft Windows XP® Microsoft Windows Vista® Microsoft Windows 7®
System	PC with DEWESoft™ software
Interface	USB 2.0
IN THE PACKAGE	
DEWE-43A	
DEWESoft™ X - Professional Edition (DSA upgrade available) incl. CAN option	
MINI USB cable (equipped with special lock-in screws for secure connection)	
Carrying bag	
Power supply with cable (comes with 4 different power plugs for world wide usage)	
Device ground cable	

DEWE-43A INPUTS		
	No of analog channels	8
	Samplerate / channels	200 kHz
	Vertical resolution	24 bit
	Input type	differential
INPUT TYPES		
	Voltage	8 ch
	Max. Range	± 10V ± 200 V MSI option
	Input coupling	DC
	IEPE/ICP Sensors	8 ch MSI option 4 mA, max 21V
	Sensor supply per system	± 5V 100 mA 12V 400 mA
	Bridge connection type	8 ch 4 wire
	Bridge completion with MSI adapter	full bridge, half bridge 1 kOhm quarter bridge 120 and 350 Ohm
	Realtime counter	8 ch
	TEDS supprt without MSI adapters	yes
	Charge input with MSI adapter	up to 50000 pC
	Potentiometer	with MSI adapter
	Pt100.. Pt2000	with MSI adapter
	Thermocouple	with MSI adapter
	CAN bus ports	2 ch (isolated)
CONNECTORS		
	DSUB 9	8 + 2
	LEMO 7pin	8
	BNC, Binder and others	MSI adapter