



Automotive
Energy & Power Analysis
Aerospace & Defense
Transportation
General Test & Measurement



All-In-One Instruments

DEWETRON All-In-One Instruments are combining a ruggedized PC with signal conditioning, A/D card, software and display.

All have the power of synchronous acquisition and analysis of vastly different signals! The flexibility of DEWETRON All-In-One Instruments allows connecting all kinds of analog signals, digital I/Os, counters, CAN bus or GPS and even video – all synchronized!

One system clock controls the whole instrument, either generated internally or from external sync interfaces like GPS-CLOCK or IRIG-CLOCK. This system clock technology allows synchronizing several independent systems even without physical connection. Each system can have hundreds of channels.

The ingenious driver and software design is the base for outstanding power and flexibility in applications. The incomparable DEWE-ORION data acquisition cards and the accurate DAQP and MDAQ modules guarantee measurements with highest precision even in harsh environments.

The computer part of each instrument is based on qualified common off-the-shelf hardware. This type of build guarantees cost-effective upgradeability of future generations of processors, even many years later, providing a secure investment.

Key Features

- Extremely flexible configuration options
- Traceable system specifications
- System clock technology
- Synchronous acquisition of analog, digital, counter, CAN bus, video and GPS data
- High speed acquisition, up to 100 MB/s gap-free streaming to disk
- Easy to use DEWESoft software for data acquisition and analysis
- Powerful PC inside for fast online displays and analysis
- Combinations of isolated DAQP series and differential MDAQ series amplifiers
- Expandable to several hundred channels
- Safe investment, easy future upgrade

Standard Models

Instruments

For Your Computer

Signal Conditioning

Components

worldwide

DEWETRON

All-In-One Instruments



	DEWE-2600 series	DEWE-5000 series	DEWE-3020 series
DAQ / PAD amplifier slots	16	16	8
MDAQ amplifier input channels	Up to 80	Up to 32	Up to 16
Combined DAQ / PAD slots and MDAQ input channels	16 DAQ / PAD, up to 32 MDAQ	-	-
Total PCI slots	7	5	3
Available with DAQ / PAD slots	4	5	3
Dynamic channel expansion	Analog, PCI, Ethernet	Analog, PCI, Ethernet	Analog, PCI, Ethernet
Quasi-static channel expansion	EPAD interface up to 16 EPAD2 modules = 128 ch	EPAD interface up to 16 EPAD2 modules = 128 ch	EPAD interface up to 16 EPAD2 modules = 128 ch
Data storage ¹⁾			
Technology	Hard disk	Hard disk	Hard disk
Capacity	600 GB	1000 GB	1000 GB
Typ. duration of recording (16 ch. / 10 kS/s/ch. / 16 bit)	20 days	35 days	35 days
Data throughput			
Standard system ²⁾	Typ. 80 MB/s	Typ. 70 MB/s	Typ. 70 MB/s
With STREAM option	Typ. 100 MB/s	Typ. 100 MB/s	-
Main system ¹⁾			
Display	15" TFT (1024 x 768)	17" TFT (1280 x 1024)	15" TFT (1024 x 768)
Processor	Intel® Core™2 Duo 2 GHz	Intel® Core™2 Duo 2 GHz	Intel® Core™2 Duo 2 GHz
Power supply			
Standard	95 to 260 V _{AC}	95 to 260 V _{AC}	95 to 260 V _{AC}
Optional	Battery powered, 3 battery slots ³⁾ , 3 batt. for ~2 hours operation incl., incl. external AC power supply, optional external DC power supply	9 to 18 V _{DC} or 18 to 36 V _{DC}	AC-DC-UPS, 95 to 260 V _{AC} and 10 to 32 V _{DC} and internal battery for approx. 3 minutes
Dimensions			
Dimensions (W x D x H)	417 x 246 x 303 mm (16.4 x 9.6 x 11.9 in.)	460 x 351 x 192 mm (18.1 x 13.8 x 7.7 in.)	377 x 168 x 284 mm (14.8 x 6.6 x 11.2 in.)
Weight without batteries	Typ. 14 kg (31 lb.)	Typ. 17 kg (37.4 lb.)	Typ. 8 kg (17.6 lb.)

¹⁾ Please find current specifications in the latest price list

²⁾ Depending on configuration (performance is different if e.g. Video data are involved and 2 or more files are written in parallel)

³⁾ Weight of one battery: 660 g (1.45 lb.)

A/D boards

Multi function PCI-board	Analog input					CAN bus	Counter input		Digital input	Analog output
	Channels per board	Simultaneous sampling	Resolution	Sample rate per channel	Sample rate total		Counter	Encoder		
DEWE-ORION-0824-20x	8	Yes	24 bit	204.8 kS/s	1.6 MS/s	Up to 2	Up to 10	Up to 10	Up to 56	-
DEWE-ORION-1624-20x	16	Yes	24 bit	204.8 kS/s	3.2 MS/s	Up to 2	Up to 10	Up to 10	Up to 56	-
DEWE-ORION-1622-10x	16	Yes	22 bit	102.4 kS/s	1.6 MS/s	Up to 2	Up to 10	Up to 10	Up to 56	-
DEWE-ORION-3222-10x	32	Yes	22 bit	102.4 kS/s	3.2 MS/s	Up to 2	2	2	Up to 32	-
DEWE-ORION-1616-10x	16	Yes	16 bit	100 kS/s	1.6 MS/s	Up to 2	Up to 10	Up to 10	Up to 56	-
DEWE-ORION-3216-10x	32	Yes	16 bit	100 kS/s	3.2 MS/s	Up to 2	2	2	Up to 32	-
DEWE-ORION-1616-50x	16	Yes	16 bit	500 kS/s	8 MS/s	Up to 2	Up to 10	Up to 10	Up to 56	-
DEWE-ORION-0816-100x	8	Yes	16 bit	1 MS/s	8 MS/s	Up to 2	Up to 10	Up to 10	Up to 56	-
M2I.3122 ²⁾	8	Yes	12 bit	10 MS/s	80 MS/s	Option ¹⁾	-	-	32 (option)	-
M2I.3132 ²⁾	8	Yes	12 bit	25 MS/s	200 MS/s	Option ¹⁾	-	-	32 (option)	-
M2I.3024 ²⁾	2	Yes	12 bit	100 MS/s	200 MS/s	Option ¹⁾	-	-	8 (option)	-
M2I.4022 ²⁾	4	Yes	14 bit	20 MS/s	80 MS/s	Option ¹⁾	-	-	8 (option)	-
M2I.4032 ²⁾	4	Yes	14 bit	50 MS/s	200 MS/s	Option ¹⁾	-	-	8 (option)	-
M2I.4652 ²⁾	8	Yes	16 bit	3 MS/s	24 MS/s	Option ¹⁾	-	-	-	-
AD16-1000-16	16	No	16 bit	62.5 kS/s	1 MS/s	Option ¹⁾	2	2	8	Up to 2 ³⁾
AD32-1000-16	32	No	16 bit	31.25 kS/s	1 MS/s	Option ¹⁾	2	2	24	Up to 4 ⁴⁾
AD64-1250-12	64	No	12 bit	19.5 kS/s	1.25 MS/s	Option ¹⁾	2	-	-	2
AD64-100-16	64	No	16 bit	1.5 kS/s	100 kS/s	Option ¹⁾	2	-	-	2

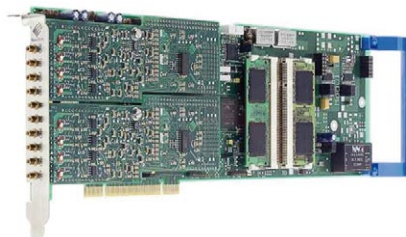
¹⁾ only with PCI-CAN2 option ²⁾ Full size card, not suitable for DEWE-211, DEWE-1201, DEWE-501, DEWE-510, DEWE-571 ³⁾ AD16-1000-16-OUT2 only ⁴⁾ AD32-1000-16-OUT4 only



DEWE-3210 series	DEWE-1201 series	DEWE-571	DEWE-901
8	-	-	-
Up to 16	Up to 16	Up to 16	Up to 64
-	-	-	-
3 3	1 -	1 -	5 -
Analog, PCI, Ethernet	Analog, Ethernet	-	Analog, PCI, Ethernet
EPAD interface up to 16 EPAD2 modules = 128 ch	EPAD interface up to 16 EPAD2 modules = 128 ch	EPAD interface up to 16 EPAD2 modules = 128 ch	EPAD interface up to 16 EPAD2 modules = 128 ch
Hard disk	Solid State Disk (SLC type)	Solid State Disk (SLC type)	Hard disk
250 GB	32 GB	32 GB	1000 GB
8 days	1 day	1 day	35 days
Typ. 50 MB/s	Typ. 40 MB/s	Typ. 40 MB/s	Typ. 70 MB/s
-	-	-	Typ. 100 MB/s
17" TFT touchscreen (1280 x 1024)	13" TFT (1280 x 800)	12" TFT touchscreen (1280 x 800)	19" TFT (1280 x 1024)
Intel® Core™2 Duo 2 GHz	Intel® Core™2 Duo 2 GHz	Intel® Core™2 Duo 2 GHz	Intel® Core™2 Quad 2 GHz
Battery powered, 3 battery slots ³⁾ , 2 batteries for ~2 hours operation incl., incl. external AC power supply	8 to 30 V _{DC} , incl. external AC power supply	Battery powered, 2 battery slots ³⁾ , 2 batteries for ~2 hours operation incl., incl. external AC power supply	95 to 260 V _{AC}
External DC power supply	Stackable battery-pack for ~2 hrs. operation with wide range DC input	-	-
425 x 340 x 191 mm (16.7 x 13.4 x 7.5 in.)	317 x 252 x 110 mm (12.5 x 9.9 x 4.3 in.)	360 x 300 x 150 mm (14.2 x 11.8 x 5.9 in.)	483 x 503 x 444 mm (19 x 19.8 x 17.4 in.)
Typ. 12 kg (26.4 lb.)	Typ. 5.5 kg (12.1 lb.)	Typ. 5 kg (11 lb.)	Typ. 25 kg (55 lb.)



DEWE-ORION series card



M2I series card



AD series card

Modes of Operation and Typical Applications

Direct Single Unit Operation

The most common use of All-In-One Instruments is to perform measurements with a single unit. Setup for each individual measurement task is done on-site and data is viewed online on the integrated screen during the measurement.

Typical applications are all mobile measurements, field service, maintenance, debug and diagnostic tasks and bringing into service tasks.

Some examples: in-vehicle data recording, rotating machine balancing, rotational and torsional vibration measurements, sound measurements, human body vibration analyses, power measurements and many more.



Remote Single Unit Operation

A popular way of using All-In-One Instruments for certain tasks is to remote control the unit by another computer. Software option DEWESOFT-OPT-NET is required for this mode. It means that the remote computer 100 % controls the instrument and e.g. starts storing. For live data view all or a selection of activated channels are transferred to the remote computer. Data can be stored on the instrument and on the remote computer as well.

A typical application is measuring in dangerous environments (e.g. on an engine test stand) and online view the data on a PC outside the test chamber.



Long Time Monitoring at Outlying Plants

In such case the instrument is setup and connected locally once and starting from then it stays unattended for a long time. For accessing the unit from anywhere we connect to a UMTS modem and use internet for viewing the data.

A typical application is measuring on windmills or radar stations

