

DEWE-3020

- Most portable all-in-one instrument
- 8 isolated DAQP or 16 differential MDAQ analog inputs
- Simple expansion to 16 isolated DAQP modules
- 3 PCI slots for A/D and other cards (1394, ARINC, 1553...)
- 15.4" TFT wide-screen display with touch-screen



Choose from two models

Add your choice of signal conditioning, A/D board(s) and software to complete these systems

DEWE-3020 series		
Input specifications	DEWE-3020	DEWE-3021
Slots for DAQ or PAD modules	8	-
Expansion connector for additional 8 channels	1	-
MDAQ input channels	-	Up to 16
Main system ¹⁾		
Total PCI slots	1 full length / 2 half length	3 half length
Hard disk	1000 GB	
Data throughput	Typ. 70 MB/s ²⁾	
Power supply	95 to 260 V _{AC}	
Display	15.4" TFT wide-screen display with touch-screen, 1280 x 800 pixel	
Processor	Intel® Core™2 Duo, 2.4 GHz	
RAM	2 GB	
Ethernet	10/100/1000 BaseT	
USB interfaces	3	
RS-232 interface	1	
Storage drive	Internal DVD +/-RW burner	
Operating system	Microsoft® WINDOWS® 7	
Dimensions (W x D x H)	377 x 168 x 284 mm (14.8 x 6.6 x 11.2 in.)	
Weight	Typ. 8.5 kg (18 lb.)	Typ. 8 kg (17 lb.)
Environmental specifications		
Operating temperature	0 to +50 °C, down to -20 °C with prewarmed unit	
Storage temperature	-20 to +70 °C	
Humidity	10 to 80 % non cond., 5 to 95 % rel. humidity	
Vibration ³⁾	MIL-STD 810F 514.5, procedure I	
Shock ³⁾	MIL-STD 810F 516.5, procedure I	

¹⁾ Please find current specifications in the latest price list
²⁾ Depends on the system configuration. Example:
 • DEWE-3020 with DEWE-ORION-1624 + 2x DEWE-CAM01 = 54 MB/s
³⁾ Tested with Solid State Disk

Additional interfaces and sensors

Measurements are not limited to just classic analog and digital signals. Please find further detailed information to expand your system in the chapter "Components".

Needed to complete the system

DEWE-ORION "A/D Boards" offer simultaneous sampled analog inputs, synchronous digital I/Os, high-performance counters and high-speed CAN interfaces. DAQP or MDAQ signal amplifiers and software are needed as well.

Options to expand the system

Add further "Interface Cards" like ARINC-429, 1553, PCM telemetry, FireWire® and analog output or special "Sensors" like synchronized video, industrial encoders (RIE-360) or GPS.



A/D card



DAQP/MDAQ



DEWESoft



DEWE-30-8-EXP



VIDEO



FlexRay

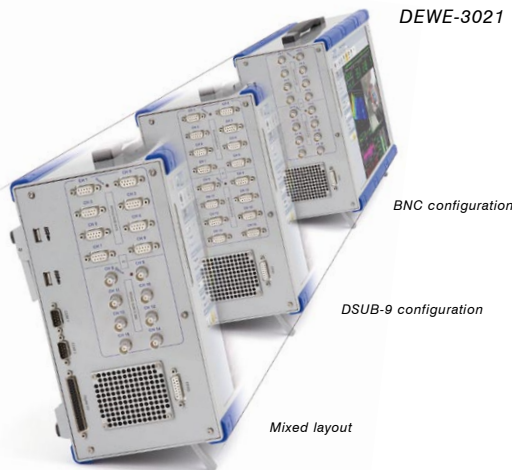


DEWE-3020

DEWE-3020

Most flexible model, prepared for DAQP isolated analog input amplifier modules. DAQP conditioners offer highest bandwidth, great accuracy, different input ranges and integrated filters. Besides the single channel modularity – a module easily can be changed by the user at any time – the main advantage of these modules is the high galvanic isolation which ensures safe measurements, high quality results and make them almost indestructible. See chapter “Signal Conditioning” for details.

Max. channel count	ANALOG	8 DAQ modules
	DIGITAL	I/O card & counter & CAN



DEWE-3021

BNC configuration

DSUB-9 configuration

Mixed layout

DEWE-3021

Version for sensor input via differential MDAQ analog input amplifiers. MDAQ modules are available in cost efficient and space saving 8-channel blocks. See chapter “Signal Conditioning” for details.

Max. channel count	ANALOG	16 MDAQ channels
	DIGITAL	I/O card & counter & CAN



DEWE-3020 with DEWE-30-8-EXP
(16 DAQP modules in total)

In case a 16 channel DEWE-ORION series A/D board is installed inside the DEWE-3020, the system can be expanded to 16 isolated DAQP modules easily. Just add a DEWE-30-8-EXP expansion unit by a convenient single cable connection.

Max. channel count	ANALOG	16 DAQ modules
	DIGITAL	I/O card & counter & CAN



DEWE-3021 with
4 encoder inputs

Adding more counters or digital inputs

Especially many automotive applications require multiple counter inputs, e.g. for connecting wheel pulse transducers. By choosing a suitable DEWE-ORION series A/D board up to 10 counters per card are available. The connectors for attaching the sensors are placed on the sidepanel near the analog inputs.

System options and upgrades for DEWE-3020 series	
Options	Description
FIREWIRE-1394	PCI Firewire IEEE-1394 interface for the DEWE-3020
3020-PS-BAT	Battery power supply with UPS function, 18 .. 24 V _{DC} non-isolated input, incl. external AC adaptor, 2 slots for hot-swappable batteries, 2 batteries for appr. 3 hours operation included
3020-DC-UPS	Power supply 10 to 32 V _{DC} with internal UPS battery and external AC adaptor, incl. 2 m DC connection cable to banana jacks
3020-CB8-BNC	Connection block with 8 BNC sockets, for simple signal connection of single-ended channels 8 to 15 of DEWE-3020 systems
DEWE-30-8-EXP	DEWE-3020 expansion, 8 additional amplifier slots for CH 8-15, only one cable for power supply, RS-485 and analog channels, incl. 2 m connection cable
DEWE-UPS-300-DC	External 300 watt UPS and multi-battery charger with isolated 10 .. 36 V _{DC} input range for powering systems with wide range DC input, output of DEWE-UPS-300-DC is 12 .. 16 V _{DC} when running from batteries and 24 V _{DC} when powered from DC, 4 slots for BAT-95WH batteries, 2 batteries included
Upgrades	Description
RAM-2048-3072	Upgrade from 2 GB to 3 GB RAM (total)
HDD-1000-SSD-128	Upgrade to 128 GB flash disk (replaces 1000 GB hard disk), max. data throughput 40 MB/s

Option 3020-PS-BAT Optional battery power supply

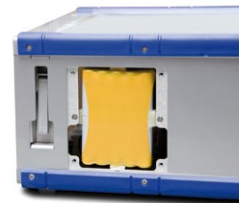
This option turns your DEWE-3020 into a fully battery powered instrument. The hot-swappable batteries guarantee continuous operation without an external power source. The instrument provides 2 slots for BAT-95WH batteries and can be operated for up to ~3 hours with 2 batteries installed. Since this time depends a lot on the system configuration a DEWESoft plugin shows the battery status directly in the software. Also alarm conditions can be set and the battery parameters can be displayed as additional measurement channels. Operating temperature is limited to 0 .. 45° C when batteries are charged.



DEWE-3020 with opened battery compartment

Option 3020-DC-UPS

This option changes the power supply of the instrument to a wide range 10 .. 32 V_{DC} input with internal UPS battery for approx. 5 minutes. That power supply is ideally suited for automotive applications as it can handle 12 V_{DC} as well as 24 V_{DC} and the internal battery nicely bridges the voltage drop during start of the engine.



3020-DC-UPS

DEWE-UPS-300-DC

The DEWE-UPS-300-DC is an external DC uninterruptible power supply with up to four internal high capacity batteries. It can be used to power instruments with wide range DC input for hours. A typical DEWE-3020 with option 3020-DC-UPS can be operated for approx. 5 hours using DEWE-UPS-300-DC. In addition the batteries are hot-swappable and so enable you to run the instrument infinitely by changing batteries every few hours. External battery chargers are available, too. If the DEWE-UPS-300-DC is externally powered it also serves as a multi-battery charger.



DEWE-UPS-300-DC

Popular accessory, car seat mounting kit for the DEWE-3020 platform

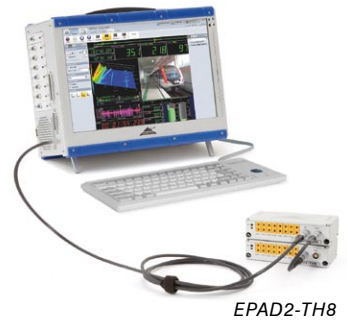
The 3020-CSMK1 is a welded metal construction and comes with heavy duty straps for the car seat and the DEWE-3020 itself.



3020-CSMK1

Channel Expansion

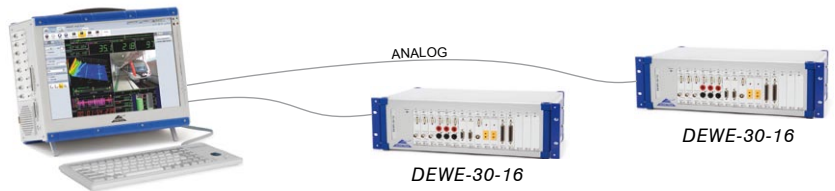
Signal conditioning for slow signals is added by connecting EPAD2 series modules to the systems EPAD interface.



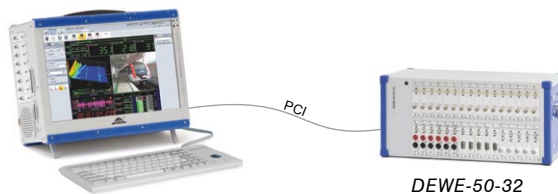
EPAD2-TH8

For expanding the number of dynamic channels there some choices:

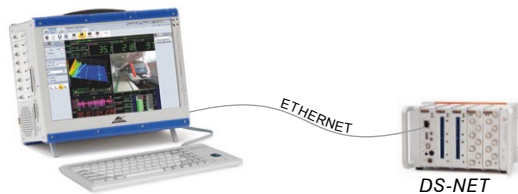
Analog cable: Additional A/D boards are installed into the basic instrument and external signal conditioning, e.g. DAQ modules in a DEWE-30 chassis, is connected by means of an analog signal cable.



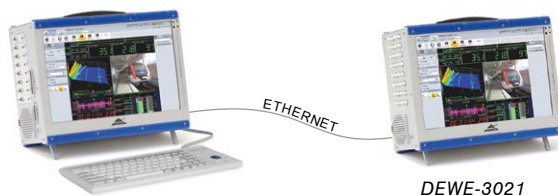
PCI expansion: A PCI-HOST card is installed into the basic instrument and external signal conditioning, e.g. DAQ modules in a DEWE-50 chassis, is connected by means of a PCI cable.



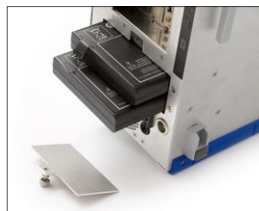
DS-NET: To expand the system with low/medium speed channels a DS-NET unit is connected to the basic instrument via Ethernet.



DEWE-NET: Several instruments are connected via Ethernet. Each unit requires an ORION-SYNC option. For short distances a sync cable is used if the units are far from each other a sync interface like IRIG-CLOCK or GPS-CLOCK is used.



3020-CB8-BNC and 3020-CB8-B connection blocks



PS-BAT Battery power supply



DEWE-30-8-EXP 8 additional amplifier slots



15.4" touch-screen for internal display as standard



The carrying bag is included as standard accessory



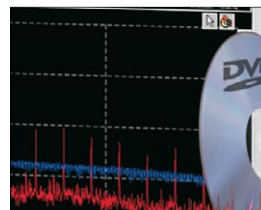
DEWE-31-16



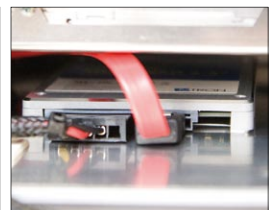
DEWE-POWERBOX-10 DC Power distribution box



Optional battery charger (range: 90 to 260 V_{AC})



DVD-BURNER for data backup to DVD or CD



Internal 128 GB Solid State Disk for maximum reliability