DEWE-501

- Compact portable instrument
- Fully battery powered, up to 2 hours without external power
- Up to 64 differential MDAQ analog inputs
- Solid state disk for extreme ruggedness
- Plenty of channel expansion options



DEWE-501	
Input specifications	
MDAQ input channels	Up to 64
Main system ¹⁾	
Total PCI-slots	3 half length
Hard disk	120 GB SSD
Data throughput	Typ. 90 MB/s
Power supply	Battery powered, 18 to 24 V_{DC} input 2 battery slots ³⁾ , 2 batteries for ~2 hrs. operation incl. External AC power supply 95 to 260 V_{AC} included External DC power supply 9 to 36 V_{DC} optional
Display	No integrated display, external MOP-DISP-12-A recommended
Processor	Intel [®] Core™ i5
RAM	4 GB
Ethernet	10/100/1000 BaseT
USB interfaces	3
RS-232 interface	-
Operating system	Microsoft® WINDOWS® 7
Dimensions (W x D x H)	439 x 209 x 181 mm (17.3 x 8.2 x 7.1 in.)
Weight without batteries	Typ. 6 kg (13.2 lb.)
Environmental specifications	
Operating temperature when discharging batteries when charging batteries with batteries removed	0 to +50 °C 0 to +45 °C -5 to +50 °C
Storage temperature	-20 to +60 °C
Humidity	10 to 80 % non cond., 5 to 95 % rel. humidity
Vibration	EN 60068-2-6, EN 60721-3-2 class 2M2
Shock	EN 60068-2-27
 ¹⁾ Please find current specifications in latest price list ²⁾ Data throughput depends on system configuration ³⁾ Weight of one battery: 660 g (1.45 lb.) 	

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

DEWE-501

There are two versions: DEWE-501-A and DEWE-501-B. Both are for sensor input via differential MDAQ analog input amplifiers. MDAQ modules are available in cost efficient and space saving 8-channel blocks. For detailed module selection see chapter "Signal Conditioning".

Max. channel count ANALOG 64 MDAQ channels DIGITAL I/O card & counter & CAN



DEWE-501-A



DEWE-501-A has a modular front panel and accepts

- up to 8 MDAQ-SUB-x-BNC modules
- 1 MDAQ-SUB-x-D and up to 5 MDAQ-SUB-x-BNC modules
- 2 MDAQ-SUB-x-D and up to 4 MDAQ-SUB-x-BNC modules
- 3 MDAQ-SUB-x-D and 1 MDAQ-SUB-x-BNC module
- up to 4 MDAQ-SUB-x-D modules

DEWE-501-B has a fixed front panel and is prepared for **u**p to 8 MDAQ-SUB-x-D modules

DEWE-501-B

Battery power

The DEWE-501 is 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 ~2 hours with 2 batteries installed. Since this time depends a lot on the system configuration the battery status is shown directly in the software. Also alarm conditions can be set and the battery parameters can be displayed as additional measurement channels.





System options and upgrades for DEWE-501 series	
Options	Description
BAT-95WH	Spare Lithium-Ion battery, 14.4 V, 95Wh, max. 8A
DEWE-DCDC-24-300-ISO	External DC/DC converter with isolation, 9 to 36 V_{DC} input range, Lemo EGJ.3B.302, incl. 2 m cable to banana jacks, 24 V_{DC} output, 300 W, Lemo EGG.2B.302 socket
BAT-CHARGER-1	Desktop battery charger for 1 battery, incl. external AC adaptor
BAT-CHARGER-4	Desktop battery charger for 4 batteries, incl. external AC adaptor
PS-BAT-REMOTE-ON	Special add-on for the battery power supply, one extra connection with a wake-up signal is needed to the power supply input of the unit, allows to automatically turn on the instrument when the ignition of the car is turned on, also turns off the instrument when the car is turned off
DEWE-501-PCI-64-A	64 channel expansion for DEWE-501, for a total of up to 128 channels, 3 internal half-length PCI slots for ORION cards, modular frontpanel prepared for MDAQ modules, PCI and SYNC interfaces and connection cables included
DEWE-501-PCI-64-B	64 channel expansion for DEWE-501, for a total of up to 128 channels, 3 internal half-length PCI slots for ORION cards, fixed frontpanel for up to 8 MDAQ-SUB-x-D modules, PCI and SYNC interfaces and connection cables included
FIREWIRE-1394	Adds a PCI Firewire IEEE-1394 interface to the instrument
Upgrades	Description
SSD-120-240	Upgrade of 120 GB flash disk to 240 GB flash disk
SSD-120-480	Upgrade of 120 GB flash disk to 480 GB flash disk

DEWE-501-PCI-64 Expansion Chassis

The DEWE-501-PCI-64 expansion chassis is available as an option to create a compact 128 channel system. The DEWE-501 is mounted on top of the DEWE-501-PCI-64. Of course the expansion has the same battery power supply as the base instrument. The two units are connected by a PCI cable and a SYNC cable.

There are also two versions, DEWE-501-PCI-64-A and DEWE-501-PCI-64-B, similar to the two versions of DEWE-501 base instrument. Such configuration is only possible when two new units are ordered at the same time as a 128 channel system.



128 channel system DEWE-501-B with DEWE-501-PCI-64



ORION sync and PCI connection



Detail: fixing bars

Further Channel Expansion

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

For expanding the number of dynamic channels there are three 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. **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 DEWE-CLOCK is used.

Display for DEWE-501

There is one external rugged displays for the DEWE-501, the MOB-DISP-12 with 12".



Example Configurations



DEWE-501-B with therm modules

48 channels "BRIDGE" and 32 channel thermocouple "K"



DEWE-501-B with MIL connection

- 64 channels "STRAIN"
- 32 channels via MIL connectors directly to the ORION A/D card



DEWE-POWERBOX-12 DC Power distribution box

Remote control via iPAD or any smartphone with installed VNC software

between 18 and 24 V_{DC}

All battery powered instruments **D** have an input range Is

DEWE-DCDC-24-300-ISO Isolated DC power supply

MOB-DISP-12 External displays

WLAN Unmanned operation with WLAN

Standard AC/DC power supply (range: 90 to 260 V_{AC})

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

The carrying bag is included as standard accessory

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