

MINITAUR-S

Compact all-in-one DAQ instrument

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MINITAUR-S is fully packed with the latest technology and a perfect compact all-in-one instrument. Based on the [SIRIUS \(http://www.dewesoft.com/products/sirius\)](http://www.dewesoft.com/products/sirius) **dual core ADC technology** offers amazing dynamic range of **160 dB**. MINITAUR-S has eight universal analog input channels, eight high-precision counter inputs and 1 CAN port for automotive applications.



Build from a solid block of aluminium, MINITAU-S is rugged and compact. With footprint of only **266 x 139 x 109 mm**, it is a perfect instrument for mobile and/or air-born applications that requires small but powerfull and reliable data acquisition device. MINITAU-S is expandable with battery packs BPi2 and BPi4 (<http://www.dewesoft.com/products/accessories/#batteries>) and compatible with all other frontends of the SIRIUS instruments (<http://www.dewesoft.com/products/sirius>).

Main Features

- Integrated powerfull PC computer
- Universal sensor inputs (Strain, Voltage, Current, DSI adaptere (<http://www.dewesoft.com/products/accessories#dsi-adapters>))
- Internal Quarter- and Half-bridge completion
- Programmable sensor excitation
- Removable SSD
- Expandable with SIRIUS (<http://www.dewesoft.com/products/sirius>)

Built-in PC

MINITAU-S comes with powerfull integrated computer (Intel Core i3) and features standard interfaces such as LAN, WLAN, VGA and HDMI. PC provides **four USB3** ports, additional **two USB2** ports and removable SSD for fast data transfer.



MINITAU-S front panel



MINITAUR-S back panel

Tech specs

Analog frontend				
Inputs	Voltage, full bridge strain, 1/2 bridge strain, 1/4 bridge strain (120Ω and 350Ω), current (ext. Shunt)			
ADC Type	24bit delta sigma dual core with 100/5 kHz analogue anti-aliasing filter (High Dynamic, up to 160 dB)			
Sampling Rate	Simultaneous 200kS/sec			
Dual Core Ranges (Low)	±10V (±500mV)	±1V (50mV)	±100mV (±5mV)	±10mV (±0.5mV)
Gain accuracy	±0.05% of reading			
Offset accuracy (Dual Core)	±5 (2) mV	±0.5 (0.2) mV	±0.1 (0.1) mV	±0.1 (0.1) mV
Offset accuracy after Balance Amplifier	0.2mV	0.02mV	0.02mV	0.02mV
Typ. Dynamic Range@10kS (Dual Core)	137 dB (152 dB)	137 dB (147 dB)	130 dB (132 dB)	112 dB (112 dB)
Typ. SNR@10kS (Dual Core)	105 dB (121 dB)	104 dB (111 dB)	95 dB (95 dB)	75 dB (75 dB)
Typ. CMR @ 400Hz (1kHz)	86 dB (96 dB)	96 dB (95 dB)	110 dB (102 dB)	110 dB (102 dB)
Input Coupling	DC			

Input Impedance	10 M Ω		
Overvoltage Protection	In+ to In-: 50 V continuous; 200V peak (10msec)		
Digital Filter (vs. Sample Rate)	1kS/s .. 50 kS/s	50kS/s .. 100kS/s	100kS/s .. 200kS/s
Bandwidth (-3 dB)	0.494 fs	0.49 fs	0.38 fs
Alias-free Bandwidth	DC to 0.42fs	DC to 0.32fs	DC to 0.22fs
Excitation Voltage	Free programmable (16 Bit DAC)		
Predefined levels	0, 1, 2.5, 5, 10 and 15 VDC		
Accuracy	$\pm 0.05\%$ ± 2 mV		
Sense Impedance to Exc / to GND	100 k Ω / > 100 M Ω		
Current limit	45mA		
Protection	Continuous short to ground		
Bridge Connection Types	Full bridge, 1/2 bridge, 1/4 bridge (3-wire)		
Ranges	2mV/V...1000mV/V free programmable with Dual Core		
Internal Bridge Completion	1/2 bridge 1 k Ω and 1/4 bridge 120 Ω and 350 Ω		
Internal Shunt Resistor	59.88 k Ω , software selectable (others on request)		
Input Short, Sensor Offset Adjust	Software selectable		
Counters (only on STGMv2+ type)	1 counter / 3 digital input, fully synchronized and alarm output		
Counter Modes	counting, waveform timing, encoder, tacho, geartooth sensor		
Input Level Compatibility	CMOS, LVTTTL		
Input Protection	± 25 Volt continuous		
Alarm output	Open collector, max. 100mA/30Volt		
Sensor supply	5V/100mA; 12V/50mA		
Additional Specifications			
Input connector	DSUB 9, Lemo2B 8pin, Lemo2B 16pin (others on request)		
TEDS support	Standard + <u>DSI adapters (http://www.dewesoft.com/products/accessories#dsi-adapters)</u>		

PC interface	
CPU	Intel Core i3, 1,7GHz, 3MB cache
RAM	4GB (up to 16GB upon request)
Storage	240 GB removable SSD option: 960 GB removable SSD option: 128 GB int. FLASH (for OS)
Power supply	9-36 VDC
Power out	same output voltage level as power in
GPS	10 Hz option

	20 Hz option + RTK option 100 Hz option + RTK option
Interfaces	2x USB 2.0, 4x USB3.0 VGA + HDMI external display interface Ethernet LAN + WLAN GPS antenna GPS display/RTK modem (DB9)
Operating temp.	0 to 50°C

Products

[Dewesoft X](http://www.dewesoft.com/products/dewesoft-x)

[SIRIUS](http://www.dewesoft.com/products/dewesoft-x)

[SIRIUS waterproof](http://www.dewesoft.com/products/sirius)

[KRYPTON](http://www.dewesoft.com/products/sirius-waterproof)

[MINITAU-R-S](http://www.dewesoft.com/products/krypton)

[DEWE-43](http://www.dewesoft.com/products/minitaur-s)

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