

4.12. SIRIUSm

Main features:

- **SMALLEST DAQ:** SIRIUS mini is our smallest, 4-channel data acquisition system, mainly suitable for acoustic, vibration, and angle measurements.
- **UNMATCHED PRICE:** SIRIUS mini ships off-the-shelf with high-quality signal conditioning and world-leading, award-winning data acquisition software for the best price on the market.
- **USB POWERED:** SIRIUS mini does not require any external power supply. It can be powered straight from a USB connection, for example, a laptop.
- **4 IEPE/VOLTAGE INPUTS:** System is configured with 4 high dynamic analog inputs, dual sigma-delta ADC's with 200 kHz per channel sampling rate and up to 160 dB dynamic range.
- **COUNTER/ENCODER/DIGITAL INPUTS:** System is configured with one counter/encoder input and is capable of 3x digital inputs, 1x event counter, encoder, period, pulse-width, duty-cycle. Precise frequency and angle measurement use patented SUPERCOUNTER® technology.



SIRIUSm-4xACC



SIRIUSm back side



Important

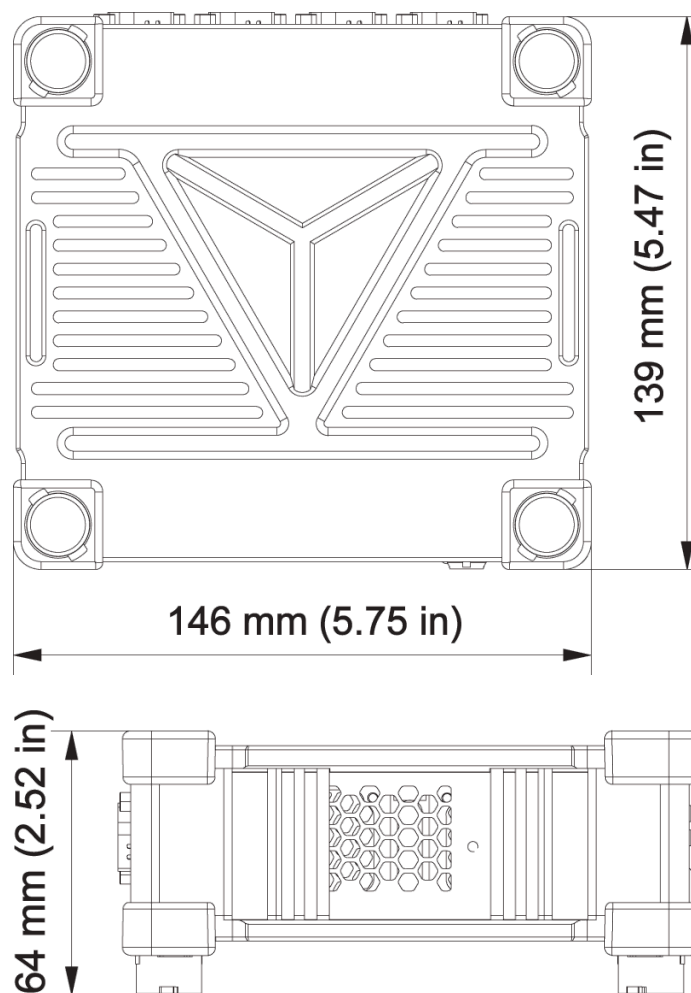
SIRIUSm does not have cooling fans.

4.12.1. SIRIUSm: Specifications

	SIRIUSm-4xACC		SIRIUSm-3xACC-1xACC+	
Analog inputs				
Input type	Voltage IEPE		Voltage IEPE	
ADC type	24-bit delta-sigma dual core with anti-aliasing filter		24-bit delta-sigma dual core with anti-aliasing filter	
Sampling rate	Simultaneous 200 kS/sec		Simultaneous 200 kS/sec	
Ranges (Dual Core Low Range)	±10 V (±500 mV)	±500 mV (NA)	±10 V (±500 mV)	±500 mV (NA)
Input Accuracy (Dual Core)	±0.1 % of reading ±10 (1) mV	±0.1 % of reading ±1 (NA) mV	±0.1 % of reading ±10 (1) mV	±0.1 % of reading ±1 (NA) mV
Dynamic Range @ 10 kS (Dual Core)	140 dB (160 dB)	135 dB (NA)	140 dB (160 dB)	135 dB (NA)
Typ. SNR @ 50 kS (Dual Core)	107 dB (125 dB)	100 dB (NA)	107 dB (125 dB)	100 dB (NA)
Typ. CMR @ 50Hz/1kHz	140 / 120 dB	140 / 120 dB	140 / 120 dB	140 / 120 dB
Gain Drift	Typical 10 ppm/K, max. 30 ppm/K		Typical 10 ppm/K, max. 30 ppm/K	
Offset Drift	Typical 0.5 µV/K + 2 ppm of range/K, max 2 µV/K + 10 ppm of range/K		Typical 0.5 µV/K + 2 ppm of range/K, max 2 µV/K + 10 ppm of range/K	
Gain Linearity	<0.02 %		<0.02 %	
Inter Channel Phase-mismatch	0.02° * fin [kHz] + 0.1° (@ 200 kS/sec)		0.02° * fin [kHz] + 0.1° (@ 200 kS/sec)	
Channel Cross talk	>160 dB @ 1 kHz		>160 dB @ 1 kHz	
Input Coupling	DC, AC 0.1 Hz,1 Hz, 3 Hz, 10 Hz		DC, AC 0.1 Hz,1 Hz, 3 Hz, 10 Hz	
Input Impedance	1 MΩ (270 kΩ for AC coupling ≥1 Hz)in parallel with 100 pF		1 MΩ (270 kΩ for AC coupling ≥1 Hz)in parallel with 100 pF	
Overvoltage Protection	In+ to In-: 50 V continuous; 200 V peak (10 msec)		In+ to In-: 50 V continuous; 200 V peak (10 msec)	
IEPE mode				
Excitation	2, 4, 8, 12, 16 or 20 mA		2, 4, 8, 12, 16 or 20 mA	
Compliance voltage	25 Volt		25 Volt	
Output Impedance	>100 kΩ		>100 kΩ	
Sensor detection	Shortcut: <4 Volt; Open: >19 Volt		Shortcut: <4 Volt; Open: >19 Volt	
Additional Specifications				
Input connector BNC	BNC		BNC & 7-pin LEMO (L1B7F) for counter input	
TEDS support	IEPE mode only		IEPE mode only	
Digital Inputs				
Inputs	✗		1 counter 3 digital Fully synchronised with analog data	
Counter modes	✗		counting, waveform timing, encoder, tachometer, gear-tooth sensor	
Input level compatibility	✗		CMOS, LVTTTL	
Input protection	✗		±25 V continuous	

Digital output	x	1 ch open collector, max. 100 mA / 30 V
Power		
Power supply	5.0 V (+0.25 V, -0.6 V) DC	5.0 V (+0.25 V, -0.6 V) DC
Power consumption	Data USB port: Max. 2.5 W Power USB port: Typ. 2.5 W, Max. 6 W	Data USB port: Max. 2.5 W Power USB port: Typ. 2.5 W, Max. 6 W
Environmental		
Operating Temperature	-10 to 50 °C	-10 to 50 °C
Storage Temperature	-40 to 85 °C	-40 to 85 °C
Humidity	5 to 95 % RH non-condensing at 50 °C	5 to 95 % RH non-condensing at 50 °C
IP rating	IP50	IP50
Shock & Vibration	Vibration sweep sinus (EN 60068-2-6:2008) Vibration random (EN 60721-3-2: 1997 - Class 2M2) Shock (EN 60068-2-27:2009) MIL-STD-810D	Vibration sweep sinus (EN 60068-2-6:2008) Vibration random (EN 60721-3-2: 1997 - Class 2M2) Shock (EN 60068-2-27:2009) MIL-STD-810D
Physical		
Dimensions	146 x 139 x 64 mm	146 x 139 x 64 mm
Weight	0.74 kg	0.74 kg

4.15.14. Dimensions: MINI



Dimensions: SIRIUSm