

SIRIUS[®] HIGH-END DAQ SYSTEMS

SIRIUS[®] MODULAR

Most flexible and distributable single slices with USB and EtherCAT[®] interface.



SIRIUS[®] SBOX

Synchronized, highly reliable data logger and powerful data processing computer.



SIRIUS[®] R4/R4rt/R4-HUB

Integrated solution with 4 SIRIUS slices and powerful SBOX computer or USB hub in one unit with real-time EtherCAT[®] slave interface.



SIRIUS[®] XHS

High-speed data acquisition system (15 MS/sec) with the new Hybrid ADC technology capable of high-bandwidth transient recording and very high-dynamic, alias-free data acquisition.



ANALOG OUTPUTS

SIRIUS slices can be configured with 8 analog outputs and function as a multi-channel function generator, can also do real-time signal conditioning, analog replay of data in analysis, and perform manual or automated control output with output voltage levels of up to +/- 10V.

HYBRID ADC TECHNOLOGY

Offers everything you ever wanted out of a high-end data acquisition system. High bandwidth and high dynamic mode available in parallel, software selectable per channel.

ISOLATED CAN BUS INTERFACE

High-speed CAN 2.0b channels with 1 Mbit/sec data throughput with additional support for CCP, OBDII, J1939, and CAN output.

Our data acquisition systems are versatile, modular, easy to use and can work with any sensor with the highest precision imaginable. Input channel configurations are flexible and the input channel count can vary from 1 to 1000's of channels. Our measurement systems are flexible and can grow with you at any time in your measurement process.

SIRIUS[®] MODULAR



UP TO 8 ISOLATED ANALOG CHANNELS OF SIRIUS DUAL-CORE OR HIGH-SPEED

UP TO 16 ANALOG CHANNELS WITH HD AMPLIFIERS

SCALABLE

SIRIUS DAQ systems can grow with needs at any time - from a single channel to a system with thousands of channels.

FLEXIBLE

SIRIUS single slices provide you the most flexible configuration. Slice-based systems can be split or combined at any time, to handle different measurement tasks.

DISTRIBUTABLE

SIRIUS EtherCAT[®] slices can be located up to 100 meters (328 feet) apart from each other, using a single cable that carries data, sync, and power!

Versatile USB and EtherCAT[®] data acquisition systems. Any signal, any sensor - packed with cutting edge technology.

USB/EtherCAT[®] INTERFACE

You can connect SIRIUS DAQ systems via USB or EtherCAT[®] to any data acquisition computer, or to one of our high-performance data loggers.

SIRIUS® AMPLIFIERS

HIGH-DYNAMIC - DualCoreADC® SIRIUS®

Our DualCoreADC® technology boosts dual 24-bit delta-sigma ADC's with an anti-aliasing filter on each channel, achieving an astonishing 160 dB of dynamic range in the time and frequency domains, with up to 200 kS/s/ch sampling rate per channel. Up to 8 channels per SIRIUS module.

Counter input: Most amplifiers can be also ordered with additional counter input featuring event counting, waveform timing, angle, encoder and speed measurements. Each counter has 3 digital inputs and 1 digital output.

	HIGH-DYNAMIC - DualCoreADC® SIRIUS®					
	STG	STGM	ACC	CHG	HV	LV
Connectors	DB9, L1B7f, L2B10f	DB9, L2B7f, L2B10f	BNC, TNC	BNC, TNC	BANANA	DB9, BNC, BANANA
Counter version	✓	✓	✓	✓	-	✓
Channels per slice	8					
Data rate / channel	200 kS/sec USB, 20 kS/sec EtherCAT®					
Resolution	24 bit DualCoreADC®					
Bandwidth	70 kHz					
Voltage ranges	±50 V, ±10 V, ±1 V, ±100 mV	±10 V, ±1 V, ±100 mV, ±10 mV	±10 V, ±500 mV	±10 V, ±500 mV	±1200 V, ±50 V	±200 V, ±20 V, ±10 V, ±1 V, ±100 mV
Input coupling	DC, AC 1 Hz (3, 10 Hz SW)	DC	DC, AC 0.1 Hz, 1Hz	DC, AC 0.1 Hz, 1 Hz, 10 Hz, 100 Hz	DC	DC, AC 1 Hz (3, 10 Hz SW)
Sensor excitation	0..20 V max. 0.8W, 0..60mA max 0.5W	0..15 V max. 44 mA	IEPE 2,4,8,12,16, 20 mA	IEPE 4,8,12 mA	-	2..30 V bipolar, 0..24 V unipolar, max. 0.2 A/2 W
Bridge connection	Full, ½, ¼ 350Ω, ¼ 120Ω 3, 4 wire	Full, ½, ¼ 350 Ω, ¼ 120 Ω 3 wire	-	-	-	Full
Programmable shunt	59.88 kΩ, 175kΩ bipolar	100 kΩ bipolar	-	-	-	-
IEPE input	DSI-ACC	DSI-ACC	✓	✓	-	DSI-ACC
Resistance	✓	-	-	-	-	-
Temperature (PTx)	✓	DSI-RTD	-	-	-	DSI-RTD
Thermocouple	DSI-TH	DSI-TH	-	-	-	DSI-TH
Potentiometer	✓	✓	-	-	-	-
LVDT	DSI-LVDT	DSI-LVDT	-	-	-	DSI-LVDT
Charge	DSI-CHG	DSI-CHG	-	100k, 10k pC	-	DSI-CHG
Current	ext. shunt, DSI-20mA, DSI-5A	ext. shunt, DSI-20mA, DSI-5A	ext. shunt	ext. shunt	-	ext. shunt, DSI-20mA, DSI-5A
TEDS	✓	✓	✓	✓	-	✓
Isolation voltage	1000 V	1000 V	1000 V	1000 V	CATII 1000 V	1000 V
Power consumption per channel	2W/ch	1.3 W/ch	1 W/ch	1.2 W/ch	1 W/ch	1.2 W/ch
Advanced functions	Supports all strain types and high input range	Low power, sensor and amplifier balance, bipolar shunt	Sensor error detection, high dynamic range	Sensor error detection in IEPE and CHG mode (injection)	High voltage, high isolation	High sensor power and multi range

HIGH-DENSITY HD SIRIUS®

High-density SIRIUS module with up to 16 channels per SIRIUS slice is the perfect choice for high channel count applications.

HIGH-SPEED HS SIRIUS®

1 MHz 16 bit SAR technology with software selectable alias-free filtering is the perfect choice for transient recording. Up to 8 channels per SIRIUS module.

HIGH-DENSITY HD SIRIUS®			HIGH-SPEED HS SIRIUS®				
HD-STGS	HD-LV	HD-ACC	HS-HV	HS-LV	HS-ACC	HS-CHG	HS-STG
DB9, L1B10f	DB9, BNC	BNC	BANANA	DB9, BNC, BANANA	BNC	BNC, TNC	DB9
-	-	-	-	✓	✓	✓	✓
16			8				
200 kS/sec USB, 10 kS/sec EtherCAT®			1 MS/sec USB				
24 bit			16 bit				
70 kHz			2 MHz	1 MHz	500 kHz	500 kHz, CHG: 200 kHz	1 MHz
±10 V, ±1 V, ±100 mV, ±10 mV	±100 V, ±10 V, ±1 V, ±100 mV	±10 V, ±5 V, ±1 V, ±200 mV	±1600 V ... ±20 V	±100 V ... ±50 mV	±10 V ... ±100 mV	±10 V ... ±100 mV	±50 V ... ±20 mV
DC	DC	DC, AC 0.1 Hz, 1 Hz	DC	DC, AC 1 Hz (3, 10 Hz SW)	DC, AC 1 Hz (3, 10 Hz SW)	DC, AC 0.1 Hz, 1 Hz, 10 Hz, 100 Hz	DC, AC 1 Hz (3, 10 Hz SW)
0..12 V max. 44 mA	2..30 V bipolar, 0..24 V unipolar, max. 0.2 A/2 W	IEPE 4,8,12 mA	-	2..30 V bipolar, 0..24 V unipolar, max. 0.2 A/2 W	IEPE 4,8 mA	IEPE 4,8,12 mA	0..20 V max. 0.8W, 0..60 mA max 0.5 W
Full, ½, ¼ 350 Ω, ¼ 120 Ω 3 wire	Full	-	-	Full	-	-	Full, ½, ¼ 350 Ω, ¼ 120 Ω 3, 4 wire
100 kΩ	-	-	-	-	-	-	59.88 kΩ, 175 kΩ bipolar
DSI-ACC	DSI-ACC	✓	-	DSI-ACC	✓	✓	DSI-ACC
-	-	-	-	-	-	-	✓
DSI-RTD	DSI-RTD	-	-	DSI-RTD	-	-	✓
DSI-TH	DSI-TH	-	-	DSI-TH	-	-	DSI-TH
✓	-	-	-	-	-	-	✓
DSI-LVDT	DSI-LVDT	-	-	DSI-LVDT	-	-	DSI-LVDT
DSI-CHG	DSI-CHG	-	-	DSI-CHG	-	100k ...1k pC	DSI-CHG
ext. shunt DSI-20mA, DSI-5A	ext. shunt DSI-20mA, DSI-5A	ext. shunt	-	ext. shunt DSI-20mA, DSI-5A	ext. shunt	ext. shunt	ext. shunt DSI-20mA, DSI-5A
✓	✓	✓	-	✓	✓	✓	✓
500 V in pairs	500 V in pairs	500 V in pairs	CATII 1000V	1000 V	1000 V	1000 V	1000 V
1.3 W/pair	1.3 W/pair	1.3 W/pair	1 W/ch	1.2 W/ch	2 W/ch	1.2 W/ch	2 W/ch
Low power, sensor and amplifier balance	High sensor power and multi range	Sensor error detection	High voltage, high bandwidth, high isolation	High sensor power and multi range	Sensor error detection, high speed	Sensor error detection in IEPE and CHG mode (injection)	High speed, supports all strain types and high input range


EXTRA-HIGH-SPEED XHS SIRIUS®

SIRIUS XHS is a high-speed data acquisition system (15 MS/s) with the new Hybrid ADC technology capable of high-bandwidth transient recording and very high-dynamic, alias-free data acquisition.

	EXTRA-HIGH-SPEED XHS SIRIUS®		
	XHS-HV	XHS-LV	XHS-ACC
Connectors	BANANA	DB9, BNC	BNC
Channels per slice	8		
Data rate / channel	15 MS/s		
Resolution	16-bit (24-bit @ 1 MS/s)		
Bandwidth	5 MHz		
Voltage ranges	±2000 V ... ±200 V	±100 V ... ±50 mV	±10 V ... ±200 mV
Input coupling	DC	DC, AC 1 Hz	DC, AC 0.1 Hz, AC 1 Hz
Sensor excitation	-	2.5..30 V bipolar, 2..24 V unipolar, max. 0.2 A / 2 W	IEPE 2 mA, 4 mA, 8 mA, 12 mA, 16 mA, 20 mA
Bridge connection	-	Full	-
Programmable shunt	-	-	-
IEPE input	-	DSI-ACC	✓
Resistance	-	-	-
Temperature (PTx)	-	DSI-RTD	-
Thermocouple	-	DSI-TH	-
Potentiometer	-	-	-
LVDT	-	DSI-LVDT	-
Charge	-	DSI-CHG	-
Current	-	ext. shunt DSI20mA, DSI5A	ext. shunt
TEDS	-	✓	✓
Isolation voltage	CATII 1000 V	1000 V	1000 V
Power consumption per channel	1 W/ch	1.2 W/ch	-
Advanced functions	High voltage, high bandwidth, high isolation	High sensor excitation and multi range	Sensor error detection, high speed