DEWESoft®

PRODUCT DATASHEET

HARDWARE

SIRIUS XR

New generation of high-performance rack systems

V26-1

7 YEAR WARRANTY

DEWESoft®

SIRIUS® XR

SIMPLE AND EFFECTIVE CONNECTIVITY AND INTERFACES

SIRIUS® XR is built for seamless connectivity and effortless integration into any test environment. With dual 10 GbE interfaces via flexible SFP connections (copper or fiber), and CAN-FD support directly on measurement slices, the system ensures fast and reliable data exchange across all levels. Advanced synchronization options—including PTPv2, IRIG, GPS, and PPS, with future-ready White Rabbit support—deliver precise timing down to the sub-nanosecond level. Combined with high-speed internal PCIe lanes for real-time processing and high-throughput data logging, SIRIUS® XR provides a powerful, streamlined connectivity backbone for modern measurement applications.

INTEGRATED GNSS WITH RTK

SIRIUS XR systems can be equipped with an optional 10 Hz or 100 Hz GNSS receiver, allowing for precise GPS positioning in navigational testing applications. These GNSS receivers also offer optional RTK support, which can enhance positioning accuracy to 1 cm.

HIGH-END SIGNAL CONDITIONING

SIRIUS® X and SIRIUS® XHS deliver versatile, high-quality data acquisition across signals such as voltage, current, strain, vibration, charge, resistance, digital I/O, encoders, temperature and more. SIRIUS XHS enables high-speed, high-bandwidth measurements for transient and dynamic events, while SIRIUS X ensures alias-free acquisition with superior dynamic range and accuracy. Together, they provide advanced signal conditioning and precise, reliable data capture for the most demanding applications.

HIGH BANDWIDTH, HIGH DYNAMIC RANGE

SIRIUS® combines two complementary technologies for optimal performance: HybridADC in SIRIUS XHS enables high-bandwidth acquisition up to 5 MHz and 15 MS/s, along with alias-free measurements up to 2 MS/s, while SIRIUS X delta-sigma amplifiers provide 24-bit resolution with superior dynamic range and signal quality at sampling rates up to 500 kS/s.

SOFTWARE INCLUDED

Every Dewesoft data acquisition system is bundled with award-winning DewesoftX data acquisition software. The software is easy to use but very rich and deep in functionality. All software updates are free forever with no hidden licensing or yearly maintenance fees.

FLEXIBLE CONFIGURATION

SIRIUS® XR offers a flexible, scalable architecture with a standard GATEWAY slice and optional built-in SBOX computer for advanced processing and high-speed data logging. An integrated network switch enables easy daisy-chaining with PTPv2 synchronization and up to 10 Gbps data throughput. Available from compact XR5 to high-channel XR9 systems, it adapts seamlessly to any measurement setup.

openDAQ SUPPORT

SIRIUS XR devices are compliant with the openDAQ, open data acquisition platform. Discover, configure and receive data from any openDAQ compatible sensors, devices and instruments in your favorite programming environment.

DEWESOFT QUALITY AND 7-YEAR WARRANTY

SIRIUS® X and SIRIUS® XHS systems deliver high-quality, versatile data acquisition across a wide range of measurement types—including voltage, current, strain, vibration, temperature, and more. SIRIUS XHS, powered by HybridADC technology, enables high-speed and high-bandwidth measurements with exceptional accuracy, making it ideal for capturing fast transients and demanding applications like e-mobility and power analysis.
accuracy, making it ideal for capturing fast transients and demanding applications like e-mobility and power analysis.

SIRIUS® XR9 COMPACT RACK DAQ SYSTEM

SIRIUS® XR9 is a powerful, high-channel-count data acquisition system designed for the most demanding test and measurement applications. Housed in a standard 19" rack with a compact 7U height, it delivers exceptional scalability and flexibility—allowing you to build a system tailored precisely to your needs while maintaining high performance and synchronization across multiple units.

Flexible channel configuration options:

- Up to 9 SIRIUS XHS and/or SIRIUS X slices for maximum channel density
- Or integrated SBOX computer + up to 8 slices for advanced processing and logging
- Up to 72 SIRIUS XHS channels, including 72 counters and 9 CAN-FD ports
- Up to 288 SIRIUS X channels for high-density measurements

Multiple XR9 systems can be easily networked in daisy-chain or star topology, with built-in PTPv2 synchronization ensuring precise, system-wide time alignment for large-scale, distributed testing setups.

SIRIUS® XR5 HIGH-CHANNEL-COUNT DAQ SYSTEM

SIRIUS® XR5 is a compact yet powerful rack-mounted data acquisition system, designed for applications where space efficiency meets high performance. With its 7U form factor, XR5 delivers the same flexibility and scalability as larger systems, making it ideal for both mobile and laboratory environments.

Flexible channel configuration options:

- Up to 5 SIRIUS XHS and/or SIRIUS X slices for versatile setups
- Or integrated SBOX computer + up to 4 slices for advanced processing and data logging
- Up to 40 SIRIUS XHS channels, including 40 counters and 5 CAN-FD ports
- Up to 160 SIRIUS X channels for high-density measurements

Multiple XR5 systems can be seamlessly connected in daisy-chain or star topology, with built-in PTPv2 synchronization ensuring precise timing across distributed measurement setups.

SPECS

SIRIUS XR SYSTEM SPECS		
Platform	**SIRIUS XR9**	**SIRIUS XR5**
No. of slots	9 (all purpose) and XR-GATEWAY	5 (all purpose) and XR-GATEWAY
Dedicated slots	8 / GPU, 9 / XR-SBOX	4 / GPU, 5 / XR-SBOX
Analog inputs	up to 288 channels (8, 16 or 32 per slot)	up to 160 channels (8, 16 or 32 per slot)
Counter inputs	up to 72 inputs (8 per slot)	up to 40 inputs (8 per slot)
CAN	CAN 2.0, CAN-FD (DSUB9) up to 9 or more, depends on DAQ slice type	CAN 2.0, CAN-FD (DSUB9) up to 5 or more, depends on DAQ slice type
Computer	XR-SBOX optional	XR-SBOX optional
XR-GATEWAY, Interfaces and options		
ON pushbutton	illuminated pushbutton, system power On/Off	
Ethernet	2x 10G SFP (copper or fiber)	
Synchronisation	PTP IEEE 1588v2 synchronization, 2x SIRIUS® SYNC (IRIG-B-DC), 2x SMA female 10 MHz clock reference In/Out, 2x SFP for White Rabbit precision synchronisation	
Analog reference input	LEMO L00B2f (for CAL-REF option)	
X-SBOXre Computer		
Processor	Intel® Xeon® W-11555MRE Processor (12M Cache- up to 4.50 GHz)	
Memory	64 GB DDR4-3200 SO-DIMM	
Storage	Non-removable 1 TB M.2 NVMe	
USB Front	4x USB 3.1 SuperSpeed+ 10 Gbps	
Ethernet	1x 2.5 GLAN (RJ45)	
Video	1x HDMI, 1x DVI-I, VGA analog on DVI-I connector (supports DVI only or VGA only)	
Cartridge 1	2x PCIe x1 (for M.2 WiFi, secondary storage)	
Cartridge 2	1x PCIe x4 (for M.2 removable storage)	
System power consumption		
Typical power consumption	300 - 350 W, Full configuration, 9x slots occupied	190 - 220 W, Full configuration, 5x slots occupied
Peak power consumption	550 - 600 W , Full configuration, 8x slots occupied and XR-SBOX	250 - 400 W , Full configuration, 8x slots occupied and XR-SBOX
Power supply input	12 - 48 V DC, 31 A max., LEMO L2B2m	12 - 48 V DC, 31 A max., LEMO L2B2m
Environmental		
Operating Temperature	-10 to 50 °C	
Storage Temperature	-30 to 85 °C	
Operating Humidity	10 to 90 % RH non-condensing	
Storage Humidity	5 to 95 % RH non-condensing	
IP rating	IP20	
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	
Physical		
Dimensions	447 x 319 x 155 mm w.o. handles, 483 x 319 x 200 mm with handles	278 x 319 x 155 mm w.o. handles, 312 x 319 x 205 mm with handles
Weight	7670 g (excl. XR-GATEWAY, XR-SBOX, slices)	5060 g (excl. XR-GATEWAY, XR-SBOX, slices)
Weight	560 g, XR-GATEWAY, 1120 g, XR-SBOX, 1300 g, SIRIUS-XHS 8xCHG w. CAL-REF, 1370 g, SIRIUS-XHS 8xUNI w. CAL-REF	560 g, XR-GATEWAY, 1120 g, XR-SBOX, 1300 g, SIRIUS-XHS 8xCHG w. CAL-REF, 1370 g, SIRIUS-XHS 8xUNI w. CAL-REF

DEWESoft®

LEARN MORE:
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