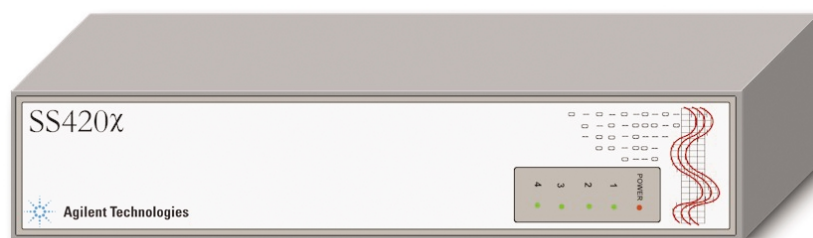




SS420x High Resolution Chromatography Acquisition Module for EZChrom *Elite*™ CDS



Analog Acquisition for the Laboratory Enterprise

The EZChrom *Elite* Chromatography Data System and Agilent OL Operating System for the Laboratory can control over 300 instrument modules from more than 25 different hardware manufacturers. Many of these HPLC and GC instruments provide state-of-the-art instrumentation that can be controlled in the EZChrom or Agilent OL software directly and have the detector output acquired by direct digital means. However, when analog output from chromatography detectors must be acquired and converted to digital data, the Agilent Technologies SS420x Instrument Interface can be used.

The SS420x is an intelligent 24-bit analog to digital conversion module that provides remote acquisition for up to 4 channels of data. Designed for laboratory use, the SS420x can work with any type of analog-signal generating chromatography detector.

A Solid Design for Today's Laboratory

The SS420x was designed to provide low noise, high linearity, and reliability in the laboratory. Over the years these modules have provided unsurpassed performance for thousands of users. The SS420x supports asynchronous acquisition from four channels, has four built-in triggers, and eight relays for programmable switching applications. It uses a proven 24-bit analog data acquisition that has established Agilent Technologies as a leader in the laboratory enterprise. A rigorous factory calibration and testing program ensures trouble-free operation.

Flexible Design for Stand Alone Workstations or Client/Server Applications

The SS420x uses a standard serial RS232 interface that can readily connect to EZChrom *Elite* stand-alone workstation PCs through the PC RS232 port. It can acquire data from

Specifications

Dynamic Range: >1,000,000 : 1

Input Signal Range: -5 to +11 Volt

Maximum Input Voltage Without Damage:

Continuous: $\pm 30V$ (power off); $\pm 45V$ (power on); Pulsed, <1 ms & <10% duty cycle: $\pm 100V$

Common Mode Rejection Ratio: 1V range: 96dB min., 10V range: 75dB min.

Normal Mode Rejection Ratio at Line Frequency $\pm 2\%$ or Nominal: 100dB min., Monotonicity: 20 bits

Zero Drift: 1V range: $<2\mu V/^{\circ}C$, 10V range: $<10mV/^{\circ}C$

Full Scale Drift: 0.002%/°C max.

Noise: $2\mu V$ RMS, 0.1 to 10 Hz bandwidth

Channel-to-Channel Crosstalk: $<1\mu V$

- **Channels:** Simultaneous asynchronous acquisition from up to four analog channels.
- **Digital Outputs:** Four digital trigger inputs to accept a contact closure or a TTL-compatible low logic signal.
- **Dimensions:** 4.75" (121 mm) H x 9" (229 mm) L x 2.75" (70 mm) W
- **Data Acquisition Rates:** from 0.1 Hz to 120 Hz depending on the base freq. used.
- **Input Signal Ranges:** 0-1 Volt, 1-10 Volt per channel.
- **Typical Data Buffer Protection:** 100 minutes per channel, at 10Hz acquisition speed.



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instruments up to 100 ft away for convenience in applications that require remote acquisition, or are conducted in a hooded environment.

The SS420x can also be applied in EZChrom *Elite* client/server networks or the Agilent OL Operating System for the Laboratory using the Agilent Instrument Controller (RS232 type). In a client/server or Agilent OL environment, the SS420x is network accessible and can be addressed from remote PC clients. Some A/D devices that require network connection can severely tax the enterprise. The SS420x, however, is a low bandwidth device that reduces network load.

Intelligence and Redundancy

Each SS420x has its own power supply and buffer. In the event of PC power loss, acquisition for the current run will continue. The unit retains an hour of data for each channel, depending on acquisition rate. A built-in CPU manages data flow from the SS420x ensuring reliable transmission to the computer.

System Status is Easy to Observe

LED status indicators, which provide start-up, data acquisition, reprogramming and error status are positioned to allow quick observation of system activity. You won't need to hover near a client PC to confirm the status of the SS420x interface.

On-Site Validation of the SS420x with the SS120c

Once deployed, the SS420x can provide continuous analog to digital conversion for a variety of analog signal generating instruments. Regulated laboratories require a simple high performance means to test and validate these devices to ensure that they are working correctly. Agilent Technologies provides the SS120c Chromatography Generator Kit to allow any laboratory the means to validate and test their SS420x converters. The SS120c provides pre-programmed analog voltage patterns that can be incorporated into an end user testing program to verify that each SS420x is correctly providing analog to digital conversion within manufacturer's specifications.

Export Information

- ECCN: 3A999.f
- CCATS: none
- HTS: 9027.20.9000

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