



## SS420x Analog/ Digital Converter Migration to 35900E Dual-Channel Interface with Modular Input/ Output for EZChrom Elite CDS

### Specifications



The purpose of this document is to describe the key differences between the SS420x and the 35900E, analog to digital converters for chromatography detectors used with EZChrom Elite Chromatography Data System.

EZChrom Elite communicates with the 35900E over a LAN connection and does not control the BCD connector used to control an autosampler. The channels in the 35900E can be configured independently within one generic instrument as described below.

#### Dual Channel or Single Channel Functionality

The Agilent 35900E functions are divided into an A channel and a B channel for individual or combined run control. To have a run simultaneously start the data collection and transmission for both channels, both channels are configured as a single 35900E interface assigned to the same instrument. To have the run start the data collection and transmission for a single channel, only that channel is assigned to the 35900E interface for the instrument. The unassigned channel can be configured as a different interface assigned to an adjacent instrument.

You can configure more than one 35900E Interface device per instrument.

Single Channel Operation	Dual Channel Operation
<p>In this mode, the Agilent 35900E operates as two independent single channel interfaces, each channel normally assigned to a different instrument.</p> <p>In single Channel configuration each channel has independent start/stop buttons, an APG Remote bus , 8 TTL I/O pin states, and an A/D converter for a single analog signal.</p>	<p>In dual channel operation, the Agilent 35900E provides two channels of data acquisition to a single device. In this mode, the Agilent 35900E is configured as part of a single instrument. It is capable of communicating with other devices with Start, Stop, and Ready outputs.</p> <p>A dual-channel configuration has a common start/stop button set, a common APG Remote bus, and two sets of digital I/O ports.</p>



**TABLE 1: Summary SS420x versus 35900E**

	SS420x	35900E
<b>Host Communications</b>		
PC control	RS-232 (Up to 100feet)	Ethernet (TCP/IP)
<b>General Specifications</b>		
Dimensions	2.75" (70 mm) High 4.75" (121 mm) Deep 9" (229 mm) Wide	4.1" (104 mm) High 11.2" (285 mm) Deep 12.8" (325 mm) Wide
Signal Channels	4 Channels (independent)	2 Channels (independent)
Connectors	Programmable: 4 digital trigger input (contact closure or TTL) 8 Relay Outputs 1 BCD connector	2 Remote connectors (TTL) (1/channel) 2 BCD connectors (16 channel I/O, 8 ch. input)
Memory	128 Kb RAM	1024 Kb RAM
<b>Electrical Specifications</b>		
Analog Dynamic Range	>60dB	>140 dB ( $\leq 2$ Hz) typical
Input Signal Range	-5 to +11 Volt (0-1 or 1-10 selectable)	-18 mV to +1.0 Volt
Input Noise	2 $\mu$ V RMS 0.1 to 10 Hz Bandwidth	40 nV RMS typical (Max. 150 nV RMS) 15 Hz Bandwidth
Resolution	24 Bit	24 Bit
Common-mode Rejection	1 V range: 96 dB min., 10 V range: 75dB min.	140 dB min., dc to 100Hz
Data Acquisition Rate	0.1 Hz to 120 Hz	0.1 to 100 Hz
Monotonicity	20 Bits	24 Bits, 0.004% FS typical

**TABLE 2: Summary of AIC Support**

Agilent Instrument Control (AIC) Model	Support (Yes/No)	Ordering Considerations
<b>8300 (Rev.A)</b>	No	Customer MUST upgrade to AIC 5000 or EZServer
<b>8500 (Rev.B)</b>	Yes - Limited	One RC.NET instrument* running at any given time. If customer requires simultaneous control of up to four RC.Net instrument, customer MUST upgrade to AIC 5000 or EZServer
<b>AIC 5000</b>	Yes	Require .Net Framework 3.0 installation & AIC Image Update.
<b>EZServers</b>	Yes	Review Hardware Requirement Documents

\*RC.Net instrument drivers include Agilent LC, 7890 and most future driver developments

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