

## SSH-4/A

4-Channel Simultaneous  
Sample & Hold Accessory for  
the DAS-1600/1400/1200

### FEATURES

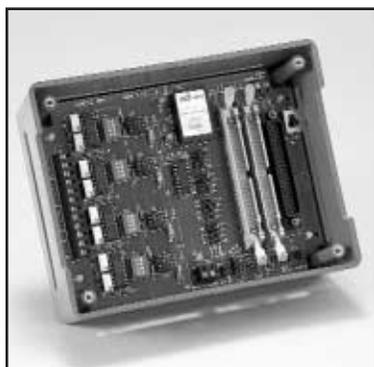
- Samples 4 DAS-1600/1400/1200 channels simultaneously
- Runs at full board speeds
- Up to 4 SSH-4/As per DAS-1600/1400/1200
- Less than 40 nsecond aperture uncertainty between channels
- Independent selectable gains per channel

### Functional Description

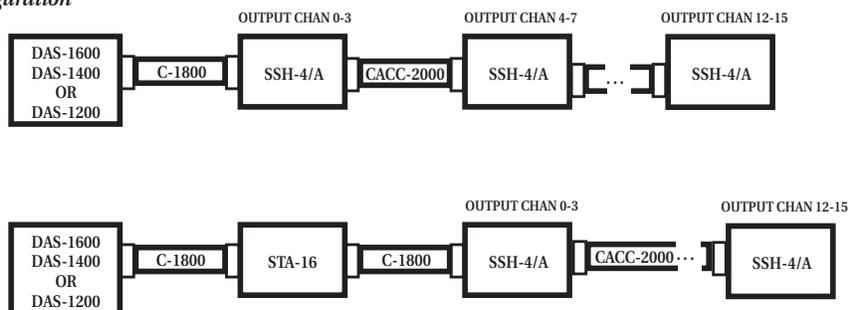
The SSH-4/A is a four-channel, simultaneous sample and hold accessory for the DAS-1600, DAS-1400, and DAS-1200 data acquisition boards. One SSH-4/A allows analog input to be acquired from 2, 3, or 4 inputs with less than 40 nseconds of channel to channel skew. Additional SSH-4/As can be added for a total of 16 analog inputs sampled simultaneously at full board speed.

Each channel contains an independent instrumentation amplifier with switch selectable gains. Gains can be set to 1, 10, 100, 200, 300, 500, 700, or 800. The SSH control signal can be supplied from an external source or it can be generated from the DAS-1600/1400/1200. If the DAS-1600/1400/1200 is selected as the SSH control signal source, the SSH-4/A takes the output of the counter 2 from the DAS board and generates the sample signal and provides a delayed conversion signal back to the DAS-1600/1400/1200.

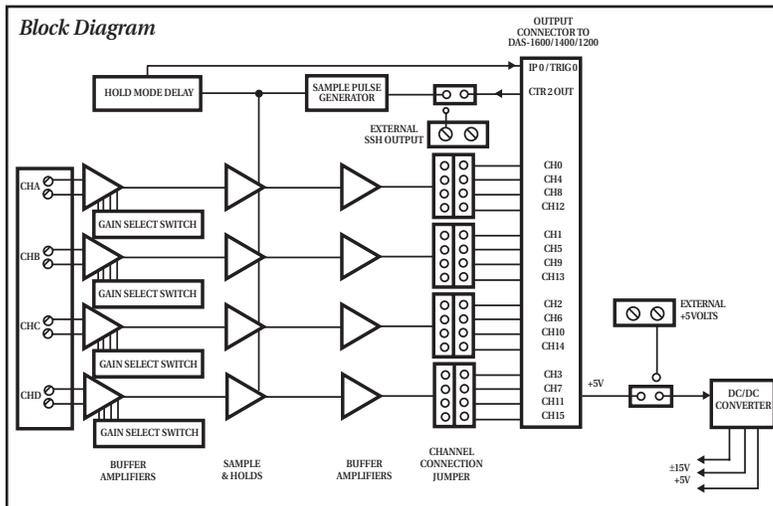
If more than one SSH-4/A is being used, it is recommended that an external +5V power supply be connected to the two terminal blocks on the SSH-4/A. The C1800 cable is used to connect the first SSH-4/A to the DAS-1600/1400. The CACC-2000 cable is used to connect two SSH-4/As together.



### Configuration



### Block Diagram



### SPECIFICATIONS

- INPUT TYPE: Differential
- ACQUISITION TIME: <10 $\mu$ s
- CHANNEL TO CHANNEL APERTURE UNCERTAINTY: <40ns typ
- OUTPUT DROOP RATE: <40 $\mu$ V per millisecond
- EXTERNAL TRIGGER: TTL Falling edge
- INPUT GAINS: 1, 10, 100, 200, 300, 500, 600, 700, 800 switch selectable

| GAIN ERRORS  |                   | NON-LINEARITY |                   |
|--------------|-------------------|---------------|-------------------|
| $\times 1$   | $\pm 0.001\%$ typ | $\times 1$    | $\pm 0.001\%$ typ |
| $\times 10$  | $\pm 0.01\%$ typ  | $\times 10$   | $\pm 0.002\%$ typ |
| $\times 100$ | $\pm 0.02\%$ typ  | $\times 100$  | $\pm 0.004\%$ typ |
| $\times 500$ | $\pm 0.1\%$ typ   | $\times 500$  | $\pm 0.01\%$ typ  |

COMMON MODE REJECTION: 90dB

### POWER REQUIREMENTS

+5V: 400mA max

### ENVIRONMENTAL

- OPERATING TEMPERATURE: 0°–60°C
- HUMIDITY: 0–95% non-condensing
- DIMENSIONS: With enclosure: 6.687in  $\times$  5.125in  $\times$  2.375in (17cm  $\times$  13cm  $\times$  6cm)  
Without enclosure: 6.18in  $\times$  4.69in  $\times$  0.94 in (15.7cm  $\times$  11.9cm  $\times$  2.4cm)

### ORDER

### DESCRIPTION

SSH-4/A 4-Channel Simultaneous Sample & Hold Accessory for the DAS-1600/1400/1200

### OPTIONS

C1800 DAS-1600/1400/1200 to SSH-4/A Cable  
CACC-2000 SSH-4/A to SSH-4/A Cable