

Note! **Important Notice! WaveBook/516E Users**
 WBK option cards for WaveBook/516E are installed at the factory per customer order. Users are not to remove or install cards for these products as the cards are not “plug-and-play” for these devices and erroneous signal values could result. If you desire to remove or add a card to WaveBook/516E contact the factory or your service representative.

Note! **Important Notice! WaveBook/516, /516A, /512A, and WBK10A Users**
 With exception of the WBK30 option, WBK option cards for WaveBook/516, /516A, /512A, and WBK10A are installed at the factory per customer order. Users are not to remove or install cards for these products [other than WBK30 series cards] as the cards are not “plug-and-play” for these devices and erroneous signal values could result. If you desire to remove or add a card to these products, contact the factory or your service representative.

Description

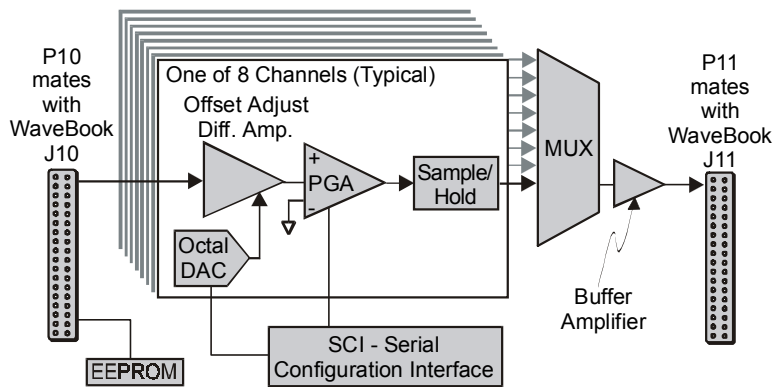
The WBK11A is a simultaneous sample-and-hold card (SSH) that provide a means of obtaining concurrent (<150 ns) capture from up to 8 input channels. The card virtually eliminates channel-to-channel time skewing. The card is controlled by the acquisition system’s base WaveBook.

The WBK11A can be installed inside a WaveBook or in a WBK10A series module; however, it must be installed by a qualified service representative (see the important notice above).

Note! **When using a WaveBook with an SSH channel enabled, the per-channel sample rates are reduced. The rate reduction is the same as that which would occur if another channel were added. The per-channel rate (with SSH enabled) is:**

$$1 \text{ MHz} / (n+1), \text{ where } n \text{ is the number of active channels.}$$

The WBK11A SSH card can accommodate higher gains than the main unit because its gains are fixed for each channel prior to the acquisition. You can use WaveView to set each channel to the ranges listed in the specifications on page 2. All channels equipped with SSH circuitry are sampled simultaneously as a system.



WBK11A Block Diagram

Hardware Setup

Configuration

All WBK11A configurations are controlled by software. There are no hardware settings.



Reference Note:

For detailed *WaveView* information refer to the [WaveView Document Module](#). A PDF version of the document can be accessed from the data acquisition CD via the <View PDFs> button on the CD's opening screen.

Installation

There is no user installation permitted. See notes on page 1.

WBK11A – Specifications

Name/Function: WBK11A; 8-Channel Simultaneous Sample-and-Hold Card

Number of Channels: 8

Connectors: Internal to the WaveBook/512 series, or WaveBook/516 series device;
a 36 pin-socket connector mates with a 36-pin connector

Accuracy: $\pm 0.025\%$ FS for WaveBook/512A applications.

For WaveBook/516 Series applications, see the table on page 3 of this WBK11A document module.

Offset: ± 1 LSB max

Aperture Uncertainty: 75 ps max

Voltage Droop: 0.1 mV/ms max

Maximum Signal Voltage: ± 5.00 VDC ($\times 1$)

Input Voltage Ranges:

Before a scan sequence begins, the input voltage ranges can be programmed via software.
The ranges can be expanded as follows:

Unipolar: Unipolar applies to WBK 10A only.

0 to +10 V
0 to +5 V
0 to +2 V
0 to +1 V
0 to +0.5 V
0 to +0.2 V
0 to +0.1 V

Bipolar: Bipolar applies to WaveBook/516, /516A, /516E, /512A, and WBK10A

-10 to +10 V
-5 to +5 V
-2 to +2 V
-1 to +1 V
-0.5 to +0.5 V
-0.2 to +0.2 V
-0.1 to +0.1 V

-0.05 to +0.05 V **This range applies to WBK 10A only.**

Programmable Gain Amplifier Gain Ranges: $\times 1, 2, 5, 10, 20, 50, 100$

Weight: 0.14 kg (0.3 lb)

Accuracy and Noise Specifications

Voltage Range	WaveBook/516 Series (Alone)			WaveBook/516 Series with a WBK11A (Note 3)		
	Accuracy (Note 2) One Year, 18-28°C		Input Noise LSB rms DC-500KHz (typical) (Note 4)	Accuracy (Note 2) One Year, 18-28°C		Input Noise LSB rms DC-500KHz (typical)
	± % reading	± % range		± % reading	± % range	
0 to +10V	.012%	.008%	2	.012%	.008%	2
0 to +5V (10A) 0 to +4V (516)	.012%	.009%	2	.012%	.009%	2
0 to +2V	.012%	.012%	3	.012%	.012%	3
0 to +1V (10A only)	.012%	.018%	3	.012%	.018%	3
0 to +.5V				.018%	.033%	6
0 to +.2V				.018%	.08%	8
0 to +.1V				.018%	.16%	15
-10 to +10V	.012%	.008%	2	.012%	.008%	2
-5 to +5V	.012%	.008%	2	.012%	.008%	2
-2 to +2V	.012%	.009%	2	.012%	.009%	2
-1 to +1V	.018%	.012%	3	.018%	.012%	3
-.5 to +.5V (10A only)	.018%	.018%	5	.018%	.018%	6
-.2 to +.2V				.018%	.033%	8
-.1 to +.1V				.018%	.08%	15
-.05 to +.05V (10A only)				.018%	.16%	26

- Notes:**
1. Specifications assume differential input scan, unfiltered.
 2. Accuracy specification is exclusive of noise.
 3. Unipolar ranges unavailable for a WaveBook/516, /516A, or /516E that has a WBK11A, WBK12A, or WBK13A option installed. Unipolar mode is available with WBK10A and any option.
 4. **Maximum limit is 1.3X typical.**



Notes