

WBK11 and WBK11A - Simultaneous Sample & Hold Cards



An Important Notice for WaveBook/516 and WBK10A Users:

Cards for the WaveBook/516 and the WBK10A are installed at the factory per customer order. Users are not to remove or install cards for these two products as the applicable 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 your service representative.

Description

The WBK11 and WBK11A are simultaneous sample-and-hold cards (SSH) that provide a means of obtaining concurrent (<150 ns) capture from up to 8 input channels. The cards virtually eliminate channel-to-channel time skewing. The cards are controlled by the system’s base WaveBook.

Note: The WBK11 and WBK11A cards are the same in function and specification, but have different methods of factory calibration. Because of this, only the name “WBK11” will be used from this point forward.

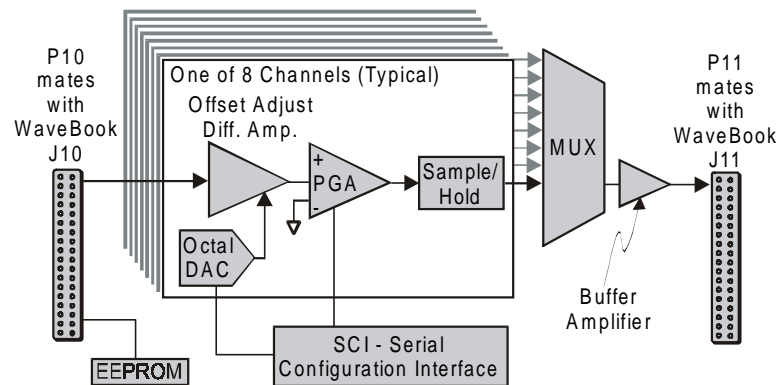
The WBK11 can be installed inside a WaveBook or in a WBK10 series module; however, for WaveBook/516 and WBK10A the cards must be installed by a qualified service representative (see the important notice above).



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:

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

The WBK11 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.



WBK11 Block Diagram

Hardware Setup

Configuration

All WBK11 configurations are controlled by software. There are no hardware settings.

Installation



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The WBK11 connects to headers J10 and J11 in the base unit. The base unit can be a WaveBook/512, WaveBook/512H, WaveBook/516, or a WBK10 series module. The jumpers located on J10 and J11 provide signal pass-through when the WBK11 is not installed.



Reference Notes:

- (1) The installation procedure is detailed in chapter 3 of the *WaveBook User's Manual*.
- (2) For detailed *WaveView* information, refer to the *WaveView Document Module*.

WBK11 and WBK11A – Specifications

Name/Function: WBK11, or WBK11A; 8-Channel Simultaneous Sample-and-Hold Card
Number of Channels: 8
Connectors: Internal to the WaveBook/512 (36-pin sockets mate with 36-pin connectors)
Accuracy: $\pm 0.025\%$ FS
Offset: ± 1 LSB max
Aperture Uncertainty: 75 ps max
Voltage Droop: 0.1 mV/ms max
Maximum Signal Voltage: ± 5.00 VDC (x1)

Input Voltage Ranges: Before a scan sequence begins, the input voltage ranges can be programmed via software. The ranges can be expanded as follows:		
WaveBook/512 & WBK10	WaveBook/512H & WBK10H	WaveBook/516 & WBK10A
Unipolar: 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	Unipolar: Unipolar does not apply to WaveBook/512H or WBK10H	Unipolar: (WBK10A Only) Unipolar does not apply to WaveBook/516
Bipolar: -5 to +5 V -2.5 to +2.5 V -1 to +1 V -0.5 to +0.5 V -0.25 V to +0.25 V -0.1 V to +0.1 V -0.05 to +0.05 V	Bipolar: -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	Bipolar: -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 (WBK 10A only)

Programmable Gain Amplifier Gain Ranges: x1, 2, 5, 10, 20, 50, 100

Weight: 0.14 kg (0.3 lb)