

# OMB-DBK45

## 4-Channel Simultaneous Sample and Hold Card with Low-Pass Filter

Model OMB-DBK45

**\$839**



- ✓ **User-Configurable Low-Pass Filter from DC to 50 kHz Cutoff**
- ✓ **Convenient BNC Input Connectors**

The OMB-DBK45 card provides TRODEKS's OMB-LOGBOOK and OMB-DAQBOARD-2000 Series data acquisition systems with four differential analog input channels equipped with low-pass filters and simultaneous sample-and-hold.

The OMB-DBK45 provides a wide selection of full scale inputs. Each channel features its own instrumentation amplifier with gain ranges of x1, x10, x100, x200, and x500, as well as individually configurable low-pass filters. This lets you maximize your signal via the OMB-DBK45's input ranges, low-pass filter the output, and simultaneously sample and hold all channels before digitizing with the OMB-LOGBOOK and OMB-DAQBOARD-2000 Series.

Up to sixty-four OMB-DBK45 cards can be attached to one OMB-LOGBOOK and OMB-DAQBOARD-2000 Series, for a total of 256 differential inputs.

### Low-Pass Filters

Each OMB-DBK45 channel is equipped with a low-pass filter that is user configured for cut-off frequencies from DC to 50 kHz, and for Butterworth, Chebyshev, or Bessel characteristics. The OMB-DBK45's frequency determining resistor and capacitor locations are on machined-pin IC sockets for maximum flexibility. The card is provided with blank plug-in headers for each channel, to which you can add passive components for particular frequencies.



The OMB-DBK45, \$839, provides 4 channels of simultaneous sample and hold, as well as low-pass filtering

Preconfigured plug-in headers for several preselected cutoff frequencies are optionally available.

### Specifications

**Connector:** DB37 male, mates with P1 pinout on the OMB-LOGBOOK, OMB-DAQBOOK or DAQBOARD data acquisition systems; BNC connectors for signal inputs

**Number of Channels:** 4  
**Number of Cards Addressable:** 64  
**Input Type:** Differential  
**Voltage Input Ranges:**

- 0 to  $\pm 5$  Vdc
- 0 to  $\pm 500$  mVdc
- 0 to  $\pm 50$  mVdc
- 0 to  $\pm 25$  mVdc
- 0 to  $\pm 10$  mVdc

**Number of Poles/Filter:** 3  
**Types of Filters:** Bessel, Butterworth, & Chebyshev  
**Frequency Range:** 0.1 Hz to 50 kHz; the frequency is set by installation of 4 to 6 resistors and/or capacitors in the provided socket locations  
**Acquisition Time:**  
 0.6  $\mu$ s (10 V excursion to 0.1%);  
 0.7  $\mu$ s (10 V excursion to 0.01%)

### Channel-to-Channel

**Aperture Uncertainty:** 50 ns  
**Output Droop Rate:** 0.1  $\mu$ V/ $\mu$ s  
**Input Gains:** x1, 10, 100, 200, 500, & user determined up to 500  
**Input Offset Voltage:**  
 [500 + 5000/G]  $\mu$ V max (nullable)  
**Input Offset Drift:**  
 [ $\pm 5$  + 100/G]  $\mu$ V/ $^{\circ}$ C max  
**Input Bias Current:** 100 pA max  
**Input Offset Current:** 50 pA max  
**Input Impedance:**  $5 \times 10^{12}$  Ohms parallel with 6 pF (without 100 K bias resistors enabled)  
**Switchable Bias Resistors:**  
 100 K each to analog common  
**Gain Errors:**

- x1 0.04% max
- x10 0.1% max
- x100 0.2% max
- x200 0.4% max
- x500 1.0% max

**Dimensions:** 82 x 209 x 19 mm (3.25 x 8.25 x 0.75")

### Cables:

Use OMB-CA-37-x with OMB-LOGBOOK and OMB-DAQBOARD-2000 Series

**AVAILABLE FOR FAST DELIVERY!**

### To Order (Specify Model Number)

Model Number	Price	Description
OMB-DBK45	\$839	4-Channel Simultaneous Sample and Hold Card with Low-Pass Filter

Ordering Example: OMB-DBK45 is a 4-channel simultaneous sample and hold card with low-pass filter, \$839.