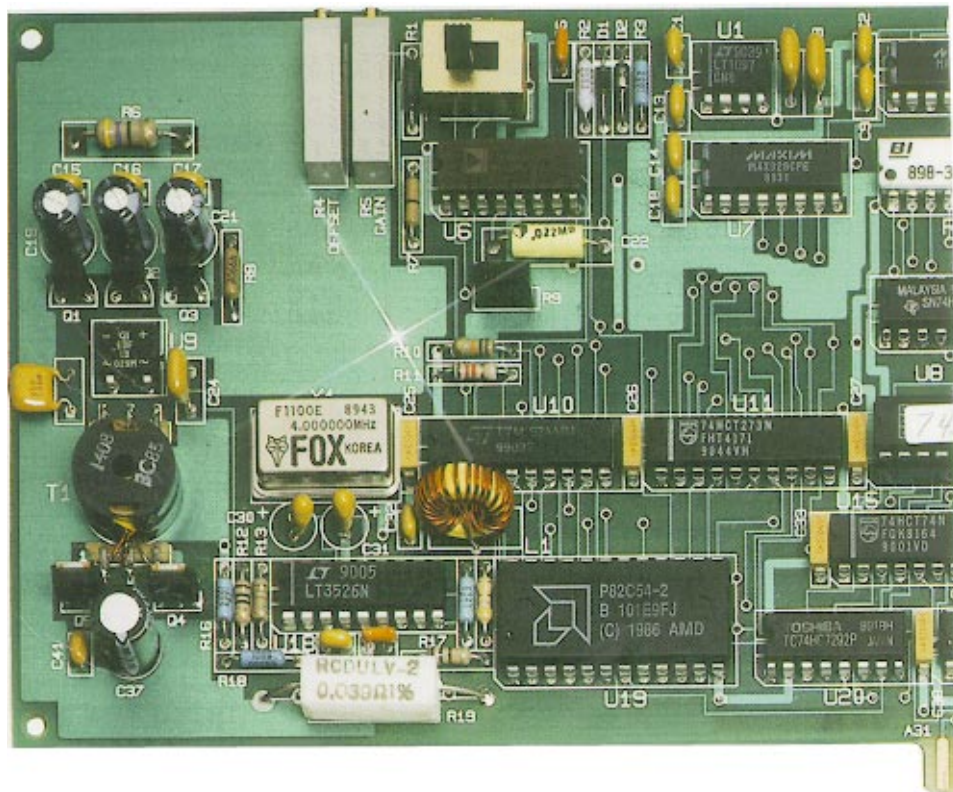# 32-Channel Temperature Measurement Board

DAS-TEMP

$449

✔ **32-Channels of Temperature Measurement**
✔ **Up to 200 Samples Per Second**
✔ **-25°C to 105°C Range**
✔ **Based on AD590 Industry Standard Semiconductor Temperature Sensor**
✔ **Uses Extremely Noise Immune Current Source Sensors**
✔ **0.1°C Minimum Temperature Resolution**
✔ **Simple to Use Software**

The DAS-TEMP is a 32-channel temperature measurement card for the IBM PC/XT/AT and true compatibles. The DAS-TEMP board offers the ideal system for making temperature measurements in a moderate temperature range. A DAS-TEMP based system is typically more accurate than similar thermocouple based systems in the -25°C to 105°C degree range and significantly less costly than RTD based configurations. The board is ideal for a variety of laboratory temperature measurements, environmental control and monitoring applications, process temperature monitoring and any other temperature monitoring application which operates in the -25° to 105°C range.

The sensors used by the DAS-TEMP are two terminal current sources whose output current is directly proportional to absolute temperature. The sensors' output equals 1 microamp/Kelvin. The probes have a measurement range from -25°C to 105°C. The current output operating mode of these sensors makes the system immune to wiring resistance variations and most noise sources. The sensors are encapsulated in steel tubes that are ¼" in diameter. The probes are available in two lengths, 6" and 1.5". A ¼" compression fitting is

also available. The sensors come with 3' of #24 stranded Teflon coated wire.

Software for the DAS-TEMP is provided in three levels. On the top level is a Mouse or Keyboard controlled "pop-up" package that allows the user to monitor temperatures and log data without programming.

The second level of software is a high-level device driver which allows the user to control the board from any software language via simple file read and write commands.

The third level of software is a "callable" driver which allows a user written program to control the board via simple subroutine calls. (These calls are much faster than using a file I/O of the device driver, but are somewhat more difficult to use.)

The DAS-TEMP supports two modes of calibration: manual and automatic. In general, there is no need to do the manual calibration if the board and sensors are calibrated together. For most applications the inherent accuracy of the transducers in conjunction with the factory calibrated board will be sufficient so that no calibration is needed.
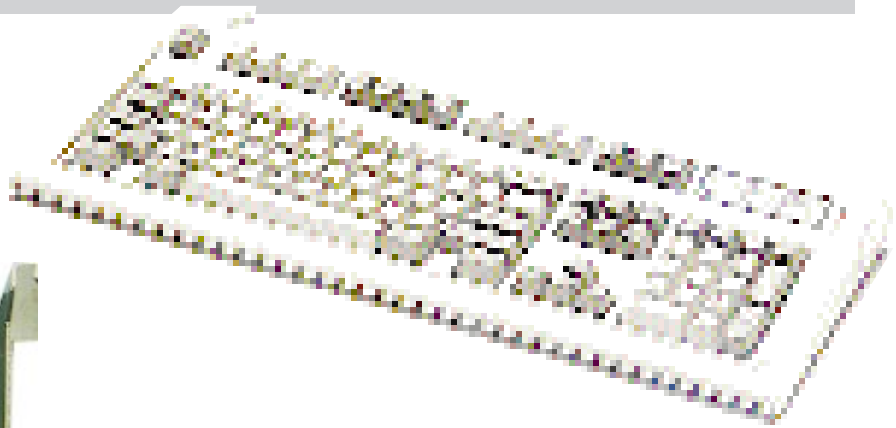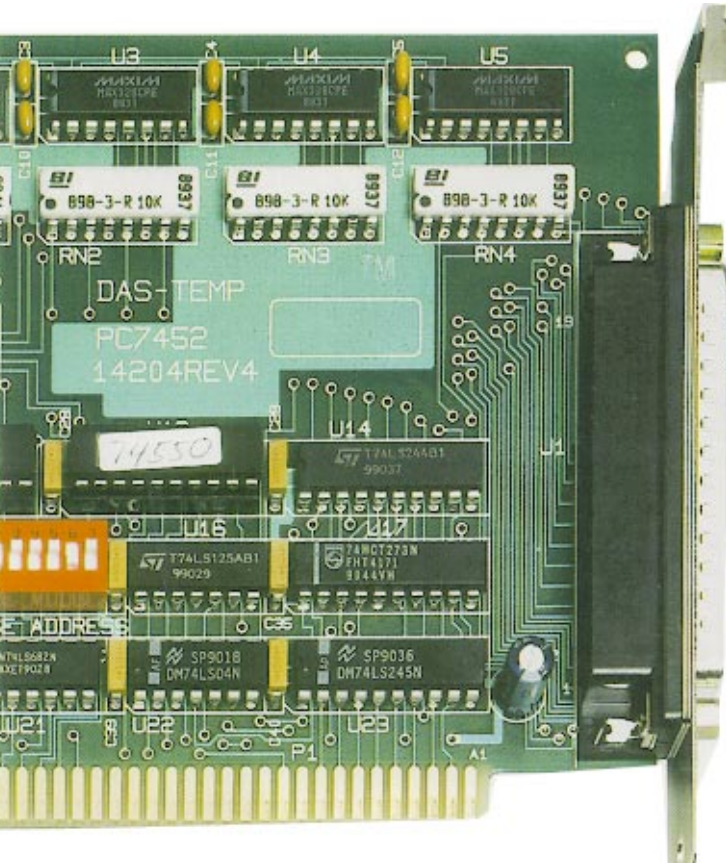
Without Automatic Calibration
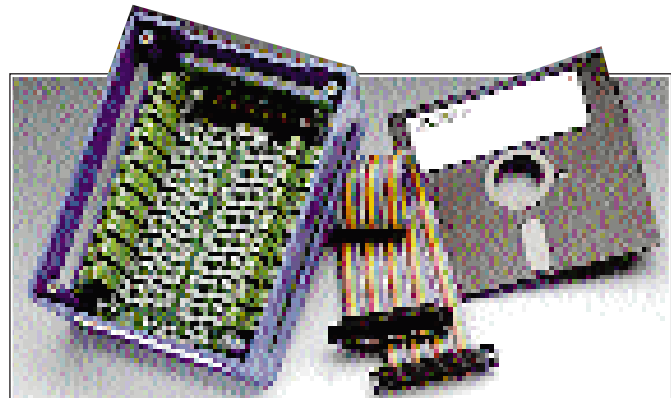**0 to 70°C:** ±0.8°C
-25 to 105°C: ±1.0°C
Long Term Drift: ±0.1°C per month
Repeatability: ±0.1°C
Absolute Max. Temp. Range of Probe: -47 to 258°F (-45 to 125°C)
Power Consumption: +5 V 600 mA., +12 V 40 mA.

STA-TEMP screw termination panel ($120) and C-1800 cable ($30)

Specifications

Probe Support: Any linear 1µA/°K current-out probe whose range is -55 to 150°C
Scan Rates:

Rate	Resol.	Accuracy*	Normal Mode Rej. Freq
200 Conv/ second	0.1°C	±0.1°C	400 Hz
30 Conv/ second	0.015°C	±0.1°C	60 Hz
25 Conv/ second	0.012°C	±0.1°C	50 Hz

Accuracy of board without sensor.

Scan Drift: ±0.0375°C reading per °C board temperature range
Dimensions: 4" H x 9.25" W (102 x 235 mm)
Weight: 8 oz. (227 g)
TOTAL SYSTEM ACCURACY (TOTAL BOARD & PROBE)
With Automatic Calibration
0 to 70°C: ±0.35°C
-25 to 105°C: ±0.6°C

To Order *(Specify Model Number)*		
Model No.	**Price**	**Description**
DAS-TEMP	$449	32 channel temperature measurement board (requires terminal panel, see below)
STA-TEMP	120	Screw termination panel (requires C-1800 cable, see below)
C-1800	30	18" interconnection cable
OM-2628-C1	45	1½" long x ¼" diameter temperature probe with 36 inch lead wires
OM-2628-C6	60	6" long x ¼" diameter temperature probe with 36" lead wire
SSLK-14-14	8.50	Stainless steel ¼" compression fitting

Comes with utility software and complete operator's manual.
Ordering Example: *DAS-TEMP 32-channel board, STA-TEMP screw termination panel, C-1800 cable, and OM-2628-C1 probe, $449 + 120 + 30 + 45 = **$644.***