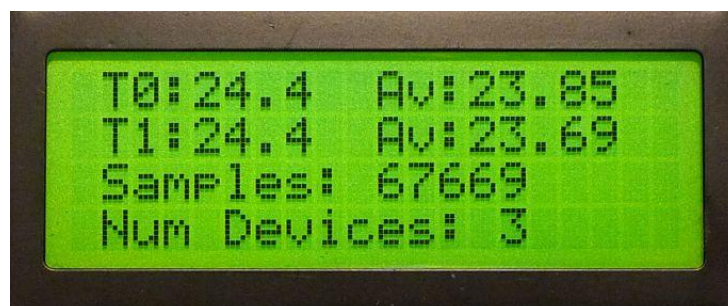


# Multi-probe Temperature Meter



- ▶ Temperature meter that can remotely read multiple Maxim DS18B20 "1-Wire" sensors.
- ▶ Each sensor probe is constructed using inexpensive sensor/resistor parts and a standard Ethernet cable.
- ▶ Digital communication allows sensor cable lengths greater than 30 m without affecting performance.
  - ◆ Accuracy: +/-0.5 C; Resolution: 0.0625 C
- ▶ Main screen shows real-time temperature and long-term average for 2 sensors.
  - ◆ Optional external USB (virtual RS232) PC terminal shows similar data if using more than 2 sensors.
  - ◆ Ethernet cables for multiple sensors can be paralleled using inexpensive combiners or by direct wiring.
- ▶ External jacks/controls: RJ45 (x2), USB Type B, barrel power (7-12Vdc, 200mA), reset/start pushbutton
- ▶ External text terminal functions include sampling Restart(reset)/Stop, Interval Setting (0s, 10s, 60s, 300s), summary statistics and output of time-stamped temperature records.



Screen snapshot of external PC terminal session, showing control/statistics screen.

```
=====
r = Restart   s = Stop   h = Help   i = Interval Set   o = Output Mode
b = Build Device List

Sample Interval = 10.0 s

Total Sampling Passes: 224
Failed Samples Per Device: 0 0 0

Device 0: 28  2A 51 E1 2 0 0   Avg: 24.3432   Delta From Common Avg: 0.0854
Device 1: 28  AA 79 E1 2 0 0   Avg: 24.1286   Delta From Common Avg: -0.1292
Device 2: 28  23 53 E1 2 0 0   Avg: 24.3016   Delta From Common Avg: 0.0438
Common Average: 24.2578
```

Screen snapshot of external PC terminal session, showing temperature capture records for three attached sensors.

```
0.0, 24.2500, 24.0625, 24.1875
10.0, 24.2500, 24.0625, 24.2500
20.0, 24.2500, 24.0625, 24.1875
30.0, 24.3125, 24.1250, 24.1875
40.0, 24.2500, 24.0625, 24.1875
50.0, 24.3125, 24.0625, 24.1875
60.0, 24.3125, 24.1250, 24.1875
70.0, 24.3125, 24.1250, 24.2500
80.0, 24.3125, 24.0625, 24.1875
90.0, 24.3125, 24.0625, 24.1875
100.0, 24.3125, 24.1250, 24.2500
110.0, 24.3125, 24.1250, 24.2500
120.0, 24.3125, 24.0625, 24.2500
130.0, 24.3125, 24.0625, 24.2500
140.0, 24.3125, 24.0625, 24.1875
150.0, 24.3125, 24.1250, 24.1875
160.0, 24.3125, 24.0625, 24.2500
170.0, 24.3125, 24.1250, 24.2500
180.0, 24.3125, 24.1250, 24.1875
190.0, 24.3125, 24.1250, 24.2500
200.0, 24.3125, 24.0625, 24.1875
210.0, 24.3125, 24.1250, 24.2500
```