

## TECHNICAL DATA

# Fluke Calibration 1620A Precision Thermo-Hygrometer



## Key features

### The most accurate temperature and humidity graphical data loggers on the market

The DewK measures temperature to  $\pm 0.125$  °C and humidity to  $\pm 1.5\%$  on two channels, and displays it on a big, clear screen. Ethernet, wireless (optional), or RS-232 will allow you to network as many DewKs as you'd like. And the [Log Ware III software](#) will allow real-time logging of multiple DewKs, data storage to your computer and seamless integration with [MET/CAL® software](#).

- Superior accuracy
- Network enabled
- Powerful logging and analysis tools
- Two interchangeable calibrated sensors
- Huge memory
- Upgraded software

## Product overview: Fluke Calibration 1620A Precision Thermo-Hygrometer

### Accuracy

The standard-accuracy sensor ("S" model) reads temperature to  $\pm 0.25$  °C over its calibrated range of 15 °C to 35 °C. Relative

humidity readings are to  $\pm 2\%$  RH from 20% RH to 70% RH.

All DewK sensors come with NVLAP accredited certificates of calibration for both temperature and humidity, complete with data and NIST traceability.

### **Ethernet and wireless capability**

With its built-in Ethernet RJ45 jack, multiple DewKs can be monitored from the same screen using [Log Ware III](#) client-server software. Ethernet also gives you the possibility for remote connectivity over the internet, so you can monitor critical conditions while you're away.

Cables running along the floor can be a safety hazard, and cables hanging from the ceiling and walls are an eyesore. With the DewK, simply connect your computer through an RF modem up to 100 ft away, without the clutter of all the extra cables.

If you need a printout, send data to a printer through the RS-232 interface in real time.

### **Math and statistical functions**

In addition to temperature and humidity, the DewK calculates dew point, heat index, and rates of change for both temperature and humidity. Min, max, and a variety of other statistics are also calculated and can be shown on-screen. Daily summary statistics, including min, max, and maximum rates of change are stored for the most recent sixty days.

### **Calibrated sensors**

With inputs for two sensors, each measuring both temperature and relative humidity, one DewK can monitor two locations at the same time. Both sensors can be run via extension cables to remote locations up to 100 feet away, or one sensor can be directly mounted to the top of the DewK.

Each sensor is calibrated for both temperature and humidity by [Fluke Calibration](#). The calibration constants assigned to the sensors reside in a memory chip located inside the sensor housing, so sensors may be used interchangeably between different DewKs, and the recalibration of sensors doesn't require an accompanying DewK.

Sensors may also be assigned a unique identifier (up to 16 characters) to facilitate record keeping by matching the sensor identifier with the collected data. Each DewK ships with one sensor, with additional sensors available directly from your local Fluke Calibration sales representative, or directly from [Fluke Calibration](#). Spare sensors may also be purchased from Fluke Calibration as a kit, which includes a case for the sensor, a wall mounting bracket, and a 25-foot extension cable.

### **Memory**

The DewK has enough on-board memory to store up to 400,000 date- and times stamped data points. That's two years' worth of data for both measurements from two sensors if readings are taken every ten minutes!

### **Alarms and battery backup**

Alarm settings can be set up quickly in the DewK based on temperature, the rate of change in temperature, RH, the rate of change in RH, and instrument fault conditions. Alarms can be both visual (flashing display) and audible (beeping). Likewise, alarm settings can be set up and events triggered in Log Ware III. The DewK is also equipped with a 0 to 12 volt alarm output that can trigger a process control system.

A backup battery shuts down the DewK's display but maintains measurements for up to 16 hours in the event of a power failure.

### **Large, easy-to-read display**

Want to view data from across the room? Want to view data from two temperature and two humidity inputs simultaneously? Want to view data graphically, statistically, or both? At the same time?! The DewK does everything you could want—or at least everything we could think of. Up to sixteen different display setups can be stored and recalled at the touch of a single button. And all 16 can be easily modified, so you get exactly what you want.

## Specifications: Fluke Calibration 1620A Precision Thermo-Hygrometer

Specifications	
Operating range	0°C to 50°C (32°F to 122°F); 0% RH to 100% RH
Calibrated temperature Accuracy	±0.25°C from 15°C to 35°C (±0.45°F from 59°F to 95°F)
Calibrated RH accuracy	±2% RH from 20% RH to 70% RH
Expected extrapolated performance (uncertified)	±0.5°C (±0.9°F) outside calibrated range ±3% RH outside calibrated range
Delta temperature accuracy	±0.025°C for ±1° changes within 15°C to 35°C (±0.045°F for ±1° changes within 59°F to 95°F)
Temperature resolution	User selectable up to 0.001°C/°F on front-panel display (0.01° recorded)
Delta humidity accuracy	±1.0% RH for ±5% changes within 20% RH to 70% RH
RH resolution	User selectable up to 0.01% on front-panel display (0.1% recorded)
Inputs	Up to two sensors, measure temperature and relative humidity, detachable, cable-extendable, interchangeable, self-contained calibrations, may be assigned unique 16-character identifications
Display	240 x 128 graphics monochrome LCD, displays password-protected temperature/humidity data graphically, numerically, and statistically (one or both channels); 16 pre-defined, user-changeable screen setups
Memory	400,000 typical individual date/time-stamped readings
Alarms	Password-protected visual, audible, and external alarms for temperature, temperature rate, RH, RH rate, and fault conditions
Alarm port output	2.5 mm two-conductor subminiature plug, 0 V normal, 11 to 12 V active, sources up to 20 mA
Connectivity	Ethernet, RS-232, RF (optional)
Ethernet	RJ45 jack, 10 Base-T or 100 Base-TX; static or dynamic (DHCP client) IP address assignment
Web page	Embedded web page interface features: instrument identification, measurements, password-protected terminal page; can be disabled
Wireless option	Requires wireless modem. 802.15.4 (underlies Zigbee), 2.4 GHz frequency, 1 mW transmit power, 30 m (100 ft) typical unobstructed range; can be disabled
Mounting	Wall mounted (hardware included) or set on a bench top
Power	12 V DC from external 100 to 240 V DC power supply
Battery backup	Standard 9 V battery enables continued measuring during power disruptions
Size (DewK) (H x W x D)	125 x 211 x 51 mm (4.9 x 8.3 x 2.0 in)
Size (sensors) (L x Dia)	79 x 19 mm (3.1 x 0.75 in)
Weight	0.7 kg (1.5 lb)

Calibration	Certificate of NIST-traceable NVLAP accredited temperature and humidity calibration included; As Found and As Left data supplied at three temperature points and three humidity points each at 20°C (68°F); Complies with NCSL/ISO/IEC 17025:2000 and ANSI/NCSL Z540-1-1994
LogWare III (optional software)	Requirements include: Microsoft® Windows® 2000 (SP4) or XP (SP2) operating system, IBM compatible Intel Pentium® IV 1 GHz PC processor or better, 512 Mb RAM (1 Gb or more recommended), 200 Mb HDD space for installation (additional free space recommended for data storage), CD-ROM drive for installation

## Ordering information



### **Fluke 1620A-S**

Fluke Calibration 1620A-S-156 Precision Thermo-Hygrometer  
Standard Accuracy

Includes:

- One standard-accuracy sensor
- Wall mount bracket
- RS-232 cable

### **Fluke 1620A-H**

Fluke Calibration 1620A-H Precision Thermo-Hygrometer  
High Accuracy

Includes:

- One standard-accuracy sensor
- Wall mount bracket
- RS-232 cable

### **Fluke 1621A-S**

Fluke Calibration 1621A-S Precision Thermo-Hygrometer  
Standard Accuracy Value Kit with spare sensor and software

Includes:

- 1620A-S Thermo-Hygrometer, Standard-Accuracy

- 2627-S Spare Sensor Kit
  - 9936A LogWare III Software, Single License
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### **Fluke 1621A-H**

Fluke Calibration 1621A-H Precision Thermo-Hygrometer  
High Accuracy Value Kit with spare sensor and software

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Includes:

- 1620A-H Thermo-Hygrometer, High-Accuracy
  - 2627-H Spare Sensor Kit
  - 9936A LogWare III single-PC license (required for use with MET/CAL software)
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### **Fluke 1622A-S**

Fluke Calibration 1622A-S Precision Thermo-Hygrometer

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Includes:

- 1621A-S Value Kit
- 2633-RF Wireless Option (requires wireless modem)
- Wireless Modem, USB to wireless

**1620A Model with High-accuracy Sensor  
(1620A-H) is available on us.Flukecal.com**

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