

## TECHNICAL DATA

# Fluke Calibration 1620A Precision Thermo-Hygrometer



## Key features

- Highly accurate thermo hygrometer and humidity monitor.
- Measure temperature to  $\pm 0.125$  °C and humidity to  $\pm 1.5\%$  on two channels.
- Offers networking capabilities via Ethernet or RS-232, connect multiple Fluke 1620s.
- Powerful logging and analysis tools, including the LogWare III software for real-time logging, data storage, and integration with MET/CAL® software.
- Two interchangeable calibrated sensors, a large memory capacity, and 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 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<br>(±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<br>±3% RH outside calibrated range                                                                                                                                |
| Delta temperature accuracy                      | ±0.025°C for ±1° changes within 15°C to 35°C<br>(±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 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



### 1620A-S

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

Part#: 2723991

UPC#: 095969364157

Includes:

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

### 1620A-H

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

Part#: 2723978

UPC#: 095969364133

Includes:

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

## 1621A-S

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

Part#: 2724035  
UPC#: 095969364195

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Includes:

- 1620A-S Thermo-Hygrometer, Standard-Accuracy
  - 2627-S Spare Sensor Kit
  - 9936A LogWare III Software, Single License
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## 1621A-H

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

Part#: 2724012  
UPC#: 095969364171

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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

Part#: 2761796  
UPC#: 095969374804

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Includes:

- 1621A-S Value Kit
  - 2633-RF Wireless Option (requires wireless modem)
  - Wireless Modem, USB to wireless
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## 9936A

Log Ware III Soft Ware, Single License

Part#: 2724086

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### **9936A-L1**

Additional 1-Pack License for LogWare III SoftWare

(Additional licenses require the purchase and installation of 9936A LogWare III Software (single license))

Part#: 2724099

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### **9936A-L5**

Additional 5-Pack Licenses for LogWare III SoftWare

(Additional licenses require the purchase and installation of 9936A LogWare III Software (single license))

Part#: 2724105

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### **9936A-L10**

Additional 10-Pack Licenses for LogWare III SoftWare

(Additional licenses require the purchase and installation of 9936A LogWare III Software (single license))

Part#: 2724110

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### **9936A-LST**

Additional Site License for LogWare III SoftWare

(Additional licenses require the purchase and installation of 9936A LogWare III Software (single license))

Part#: 2724122

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**Fluke Corporation**  
PO Box 9090, Everett, WA 98206 U.S.A.

**For more information call:**  
In the U.S.A. (800) 443-5853  
In Canada (800) 36-FLUKE  
From other countries +1 (425) 446-5500  
[www.fluke.com](http://www.fluke.com)

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