



CCAHA specializes in the treatment of art and historic artifacts on paper and provides preservation education, training, and consultation. Established in 1977, CCAHA is the largest nonprofit conservation lab in the country.

2017 Lower-Cost Environmental Datalogger Quick Comparison Chart

Model and Manufacturer	Accuracy	Measurements	Wireless/Bluetooth/USB	Unit Price*	Needs Additional Software Purchase**	Notes
EasyLog EL-USB-2 Lascar www.lascarelectronics.com	(±1.04°F) 31-176°F RH ±2.25% (10-90% RH)	Temperature RH	Datalogger connects directly to computer	\$82/ea	Software available for free download from manufacturer.	
HAXO-8 Humidity and Temp Logger LogTag http://techinstrumentation.com	±0.5°C @ 25°C ±3%RH @ 25°C	Temperature RH	Requires LogTag Cradle at \$47	\$63/ea	Software available for free download from manufacturer.	Customizable alarm settings
HOBO Temp/RH Data Logger MX1101 Onset www.onsetcomp.com	±0.38°F from 32° to 122°F	Temperature RH	Wireless via Bluetooth	\$135/ea	Free download of HOBOMobile app	Customizable alarm settings/alerts sent to mobile phone
HOBO Temp/RH/Light External Logger U12-012 Onset www.onsetcomp.com	±0.63°F (32° to 122°F) RH: ± 2.5% from 10% to 90%; below 10% and above 90% ±5%	Temperature RH Light Intensity	USB cable	\$140/ea	HOBOWare free for download HOBOWare Pro \$75 for download	LCD display

HOBO 3.5% Temp/RH Data Logger UX100-003 Onset www.onsetcomp.com	±0.38°F (32°F to 122°F) RH ±3.5% from 25% to 85%	Temperature RH	USB cable	\$89/ea	HOBOWare free for download HOBOWare Pro \$75 for download	LCD display
LogE-Z Wireless Temp and Humidity Logger RTR-322 TandD www.microdaq.com	±1.0°C (0°C to 50°C) RH ±6% at 25°C and 50%	Temperature RH	Wireless communication between logger and Wireless Dongle, \$69 ea.	\$87/ea	Software available for free download from manufacturer	Fixed sampling interval of 10 minutes
PEM2 Image Permanence Institute www.imagepermanenceinstitute.org	±0.5°C RH ±2% at 10% to 90%	Temperature RH	Portable drive (included)	\$349/ea	eClimateNotebook software available free	Battery lasts for approximately 10 years
Omega Portable Temperature/Humidity LCD Data Logger with USB Interface OM-143 Omega www.omega.com	±1.8°F from -10 to 40°C (14 to 104°F) ±3% RH from 20% to 80%	Temperature RH	Datalogger connects directly to computer	\$80/ea	Comes with free software CD.	
Tinytag Ultra 2 TGU 4500 Gemini www.gemindataloggers.com	±3.0% RH at 25°C / 77°F	Temperature RH	Proprietary USB cable (included with software)	\$165/ea	Tinytag Explorer software \$87.30 including connecting USB	
Track-It Temp and Humidity Logger 5396-0203 Monarch Instruments www.monarchinstruments.com	±2.0 (-20°C to 70°C) RH ±3% at 20% to 80%	Temperature RH	Datalogger connects to computer	\$79/ea	Track-It software available from manufacturer as free download.	

Note: This chart is for reference only. CCAHA does not endorse or recommend any of the above models.

*Price as of July 2017 from online retailers.

**All dataloggers should be calibrated routinely per manufacturer's instructions, which may incur an additional fee. See manufacturer's website for information.

Further reading: National Park Service, Comparing Temperature and Relative Humidity Dataloggers for Museum Monitoring.

<https://www.nps.gov/museum/publications/conservation/03-03.pdf>