



Hubble

Non-contact laser-guided color measurement

Hubble is a new and exciting high-accuracy, non-contact colorimeter for measurement of direct-view LCD, LCD/RPTV, direct view CRT, CRT/RPTV, front projectors, plasma—nearly every type of display technology in use today. Developed by X-Rite's Center of Excellence for Display Technologies, Hubble provides the accuracy of more expensive devices in a portable, low-cost package

Benefits of Hubble



- Professional accuracy
- Low cost
- Portable
- Easy to use

Hubble is designed for measurement of today's large and micro-display technologies; found in home entertainment, computer displays, handheld devices, theater projection, and many others. Perfect as a primary instrument for single-instrument shops, Hubble also provides a high-accuracy secondary reference through simple calibration to the primary instrument. Thus, Hubble provides the opportunity to own many portable secondary references at the budget level of the primary reference. And, it's designed for rugged, field-based operations.

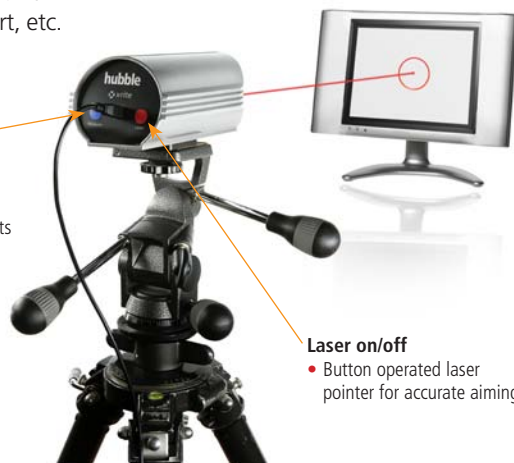
And user operation is simple! Just set up Hubble on a tripod, connect instantly to the USB port on your computer, point the laser, and measure. No wall mounts, to fuss with, all control is from your laptop screen. You can get either single-point measurements or a continuous stream of live data from your Hubble for storage in spreadsheet-ready format.

Designed by engineers for engineers, Hubble covers a wide variety of high-tech applications

- **Incoming QA:** Inspection and measurement of supplied displays
- **Production QC:** Quality inspection during and post-manufacture
- **Calibration:** Calibration of product during manufacture
- **Lab:** Measurement of technologies in R&D
- **IT:** Field calibration of medical displays, in-house projection systems, service support, etc.

Take measurement

- Push button to take a measurement and transmit data to the PC host.
- Hold button down to stream measurements at the rate of the sensor.



Laser on/off

- Button operated laser pointer for accurate aiming



Product Highlights

High-accuracy colorimeter

- Four color sensors, one each RG/two for blue
- x,y: +/- .002 Y: +/- 1% (full white)
- Integrated temperature compensation circuit

State-of-the-art technology

- Large area light-to-voltage light-sensing ICs
- Charge-pump technology to measure sensor output
- 8° field-of-view

Two factory calibrations for accurate measurement of specific display types

- Factory calibrations on CRT and DLP provide accurate measurement across all typical light source spectra
- User selectable for each measurement via UI or SDK

User calibration support

- 14 user-addressable calibration matrices
- May be calibrated by user to other reference devices or to a specific display type
- Auto calibration software for calibrating to customer PR-650 via serial connection

USB interface to host for data and power

Communications

- Hubble sends measurement data in either xyY or XYZ under program control
- Hubble sends either a single measurement or continuous data stream under program control

Software

- Hubble ships with a tech-level software utility to enable the user to make measurements using a PC
- The software enables manual measurement via push-button or mouse click
- The utility software allows a user to:
 - Select a specific calibration matrix for measurement
 - Make a measurement
 - Make multiple, continuous measurements
 - Store measurement data in a named file
 - Export measurement data to Excel

Hubble includes a complete, documented free, SDK which allows users to create their own applications and utilities.

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