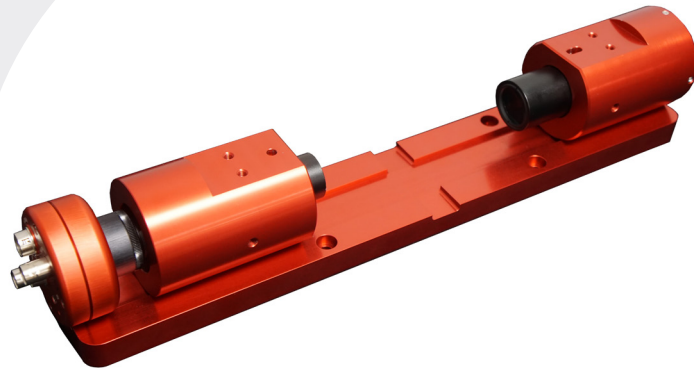


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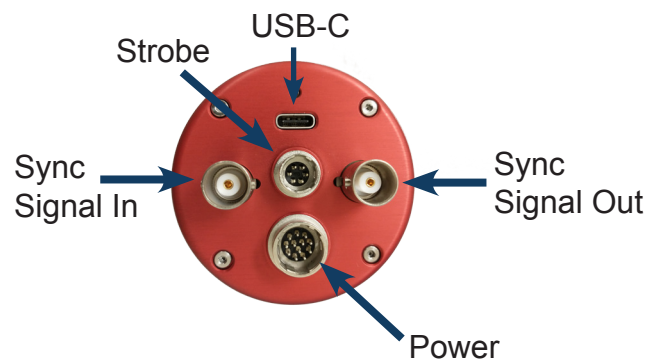
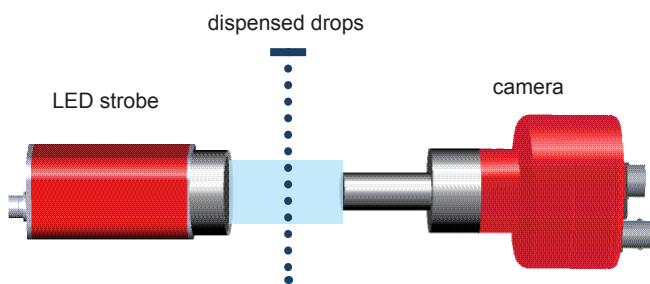
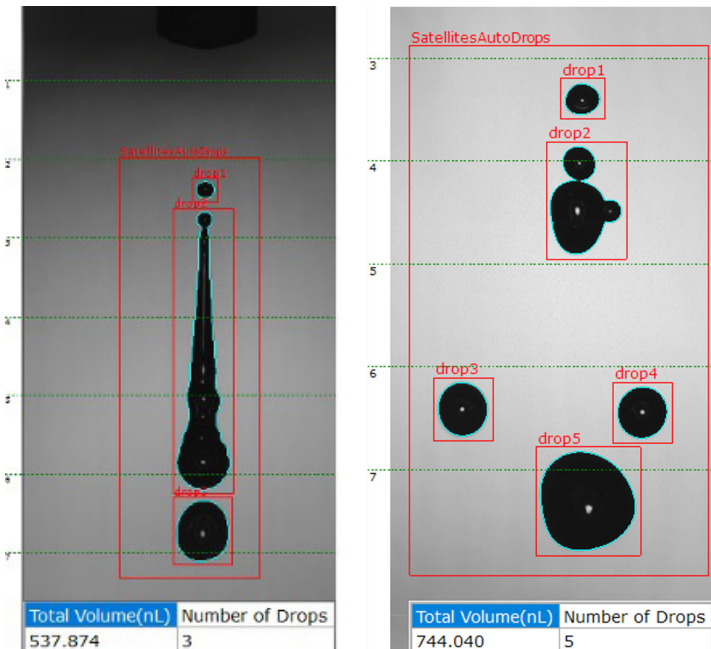
Drop-In-Flight Analysis for Dispensers



The JetXpert OEM Advantage

Easily integrate drop analysis and verification into your system

- Measure drop volume, velocity, trajectory, and satellites
- Visualize drop formation, consistency, and stability
- Analyze streams, oblong drops (*left*), or multiple drops (*right*)
- Produce accurate statistics and capture transient effects with single event imaging of individual drops
- Study the effects of adjusting fluid and dispenser parameters for ease of optimization
- Eliminate risk of evaporation, misfires, and operator weighing error of traditional volume measuring techniques
- Identify misdirected satellites to prevent cross-contamination
- Integrate with any dispensing technology that produces discrete drops



Strobe-based Capture System

JetXpert OEM uses a synchronized strobe positioned behind dispensed droplets and a camera in front to capture images of drops in flight in silhouette, allowing for evaluation of translucent and opaque fluids.

Strobing is slaved to the dispensing head drive frequency or external frequency generator.

System Optimization

Measuring the in-flight characteristics of fluid droplets under different conditions can aid in optimizing dispensing system settings, fluid formulation and system performance. Manufacturers of print heads, dispensing tips and heads, driver electronics and actuators, fluids, and integrated material deposition systems can benefit from analysis of drops-in-flight.

System Configuration

Light source	High-powered LED strobe, proprietary lens for maximum image brightness
Camera	Digital camera, 2592 x 1944 pixels, with onboard strobe control.
Lens	Fixed magnification lens, FOV between 1.5-12mm, depending on application requirements
Calibration	Factory calibrated with calibration target included to recalibrate in the field
Strobe pulse width	100ns to 1000ns (1 μ s) in increments of 50ns
Analysis	Built-in analysis for drop volume, velocity, trajectory, satellites, and statistics thereof
Sync signal	Nominal TTL (0-5VDC) input signal via dispenser controller or external signal generator Accepts input (low) between 0-1V, and input (high) between 2.5-5V
Frequency range	Minimum: <1Hz Maximum: 100kHz, 50% duty cycle
Data	Includes PC based GUI with graphical feedback and automatic data reporting to file
Frame Rate	Up to 10 frames per second
Dimensions	15.5" L x 2.5" W x 3" H (39.4cm L x 26.3cm W x 7.6cm H)
Operating System	Windows

Learn more at <http://imagexpert.com/drop-analysis/inline-drop-measurement/>