

# TRUE NON-CONTACT TECHNOLOGY™

Acoustic Liquid Dispensing



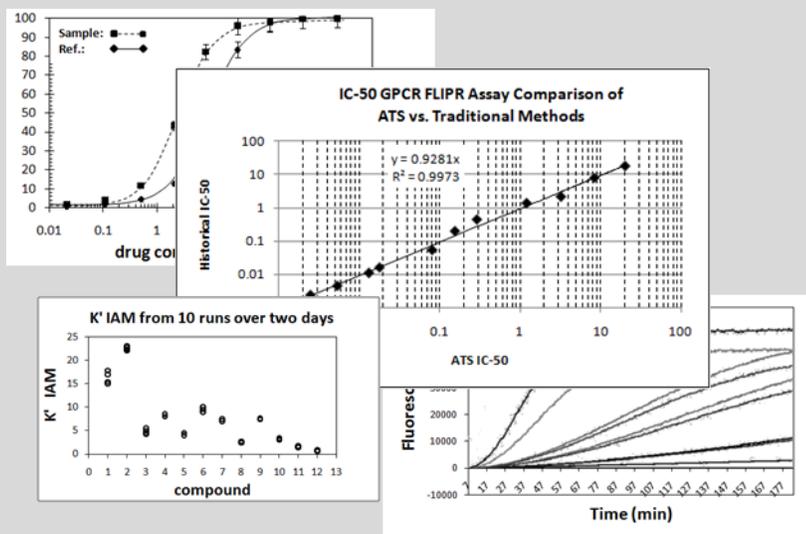
## ATS Gen4+

ACOUSTIC TRANSFER SYSTEM

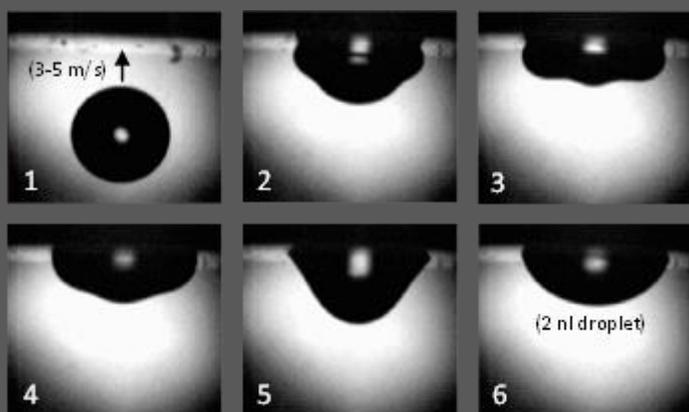
EDC BIOSYSTEMS™

Expand your capabilities using the ATS Gen4+ Acoustic Transfer System. Reliably dispense ultra-low liquid volumes for your screens, assays, and arrays while reducing waste, time and costs.

- 1.0 – 20 nL drop sizes
- 1 nL – 100 µL transfers
- < 8% CV's on all dispenses
- Dispense from acoustic-friendly plates from leading manufacturers
- Lowest starting/dead volumes
- Open platform for application flexibility



**More Applications** No other instrument can provide the level of flexibility that the ATS has. From pre-plating of compounds for screening, dose-responses, hit-picking, plate reformatting, to PCR, protein crystallography, niche arrays, and delivery of liquids onto microfluidic devices, the ATS Gen4+ is designed and built ready to handle any application requiring accurate and precise liquid transfers of ultra-low volumes.



Dispensed 2 nL droplet landing onto a destination positioned upside-down and directly above the source well. Regardless of high velocity at impact and orientation, the droplet does not disintegrate or fall due to the dominating effect of the liquid surface tension at this volume scale.

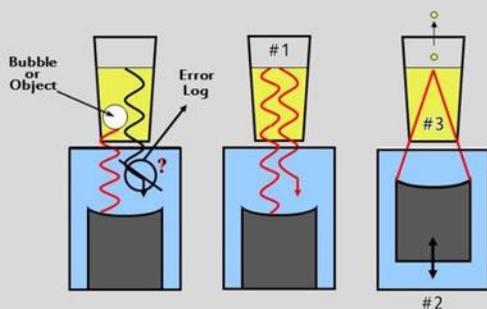
**Higher Performance** The ATS can dispense liquids from 96, 384, 1536 & 3456 wellplates. Transfer liquid from your choice of source plate\* to any destination substrate imaginable.

Total liquid transfer volumes start as low as 1.0 nL. A wide range of liquids can be transferred by the Gen4+ using any calibration available on the system.

The ATS has lower starting and dead volumes than any other automated instrument, delivering high-performance while conserving resources and reducing costs.

\*Includes wellplates available from Aurora, Corning Inc. and Greiner Bio-One. Other plates from other manufacturers may be used as well.

*For cell-based assays, the Gen4+ can evenly spread nanoliter droplets of the agonist or antagonist over the entire surface area.*



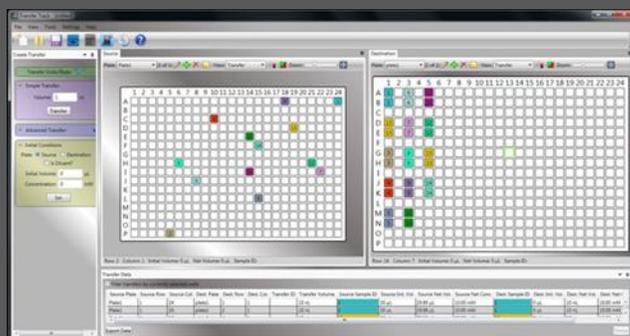
**Real-time Sensing & Focusing** The ATS utilizes real-time sensing and focusing technology. Before each dispense, a sensing pulse gathers information on the acoustic path. After receiving a return signal (#1), the acoustic system makes necessary adjustments (#2) and then fires the dispensing pulse (#3). This entire process takes less than 50 milliseconds.

A key benefit of this real-time dispensing process is its ability to reveal potential problems in the acoustic path. Errors are logged and the ATS moves onto the next dispense. Missed wells are identified and can be re-tried or excluded from the final analyses. This greatly reduces the incidence of false-negatives in experiments.

The ATS Gen4+ Acoustic Transfer System dispenses chemical and biological solutions with unparalleled accuracy and precision. The instrument is flexible, application friendly and highly adaptable to meet a broad range of liquid handling needs.

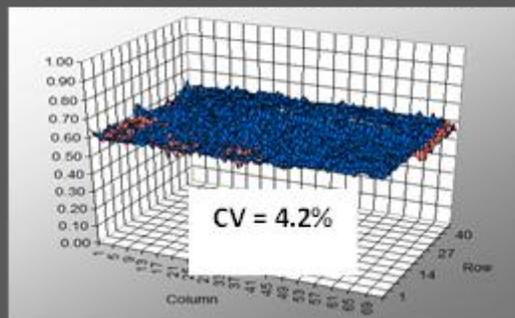
EDC Biosystems' patented acoustic transfer process allows you to perform your experiments with the lowest starting volumes of any liquid handling device on the market. There are no pins, print heads or volume-specific tip sizes to deal with, and no cross-contamination.

The Gen4+ easily integrates with other laboratory equipment for a complete automated solution.



Transfer Track Plate Mapping Software

Fluorescence Data: 1:1 Liquid Transfer of 2.0 nl  
From a 3456 Source to a 3456 Destination



- Low energy acoustics
- DMSO determination of all source wells
- Real-time liquid level measurements
- Intuitive Plate Mapping GUI
- 96, 384, 1536 & 3456 source & destination wellplates

**Total Cost of Ownership** Cost savings is more than just about the price of the instrument. The Gen4+ has a low cost of ownership. Installation is easy with only power and clean dry air required. As a result, maintenance costs are kept to a minimum. All functional application software is included.

EDC Biosystems' training and maintenance programs empower users to be more independent with instrument ownership. The ATS can also utilize a wide range of source plates without sacrificing low dead-volumes or performance, lowering consumable costs.

**Reduce Waste** The ATS uses True Non-contact Technology which does not require tips or capillaries. This eliminates tip disposal and cleaning with harsh solvents. In addition, since transferred liquid volumes can be orders of magnitude less than conventional liquid handling methods, the entire assay or experiment can also be miniaturized, greatly reducing consumable and chemical waste.



### Specifications

- |                     |                           |                         |                 |
|---------------------|---------------------------|-------------------------|-----------------|
| • Fluid viscosity:  | 0—100 cP                  | • Transfer volume:      | 1 nL to 100 µL* |
| • Surface tension:  | 27—72 dynes/cm            | • Transfer variability: | < 8% CV         |
| • Density:          | 0.5—2.0 g/cm <sup>3</sup> |                         |                 |
| • Single Drop Size: | 1—20 nL                   |                         |                 |

\*Larger volumes increased transfer times

### System Components

- |  |                                      |
|--|--------------------------------------|
| • Internal coupling fluid system       | • Internal barcode reader            |
| • Wellplate charge-neutralizing system | • Internal destination plate flipper |
| • USB camera wellplate monitoring      | • Ethernet-based connectivity        |
| • Wellplate interference safety sensor | • Built-in Windows based PC          |

### Special Features

- |  |  |
|--|--|
| • Application and mapping software     | • Landscape wellplate orientation for both source and destination plates |
| • Quick-change destination gripper     | • Work cell integration and automation-ready                             |
| • Real-time data management system     |  |
| • Single-position plate load/unloading |  |

### Dimensions and Facilities

- |                  |                      |                   |  |
|------------------|----------------------|-------------------|--|
| • Size (cm):     | 71 x 78 x 65 (WxDxH) | • Electrical:     | 110 VAC, 50/60 Hz<br>230 VAC, 50/60 Hz |
| • Weight:        | 115 kg               | • Coupling fluid: | distilled water (400 ml)               |
| • Clean dry air: | 80 psi, 2 CFM        |                   |  |

### Distributors , Sales & Support

- Factory-trained sales and support engineers located in every major market



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