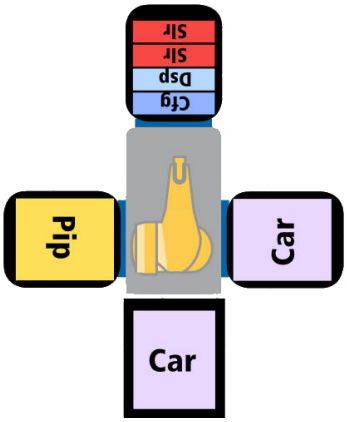
Applications: Compound Delivery

Transferring a compound collection to a set of assay plates in a reliable and controlled way is key in the drug discovery process. Integrations can range from classical liquid handlers (for tubes and plates) to the more recent use of acoustic dispensing units for direct transfer of liquids to assay plates. We have configured two example systems to demonstrate the key advantages HighRes offers for Compound Delivery applications.

NanoCell

Acoustic Compound Delivery

1 x Rbt	Denso Robot	1 x Slr	Automated Heat Sealer
1 x Pip	Acoustic Dispensing Device	1 x Slr	Automated Heat Seal Remover
1 x Car	HighRes AmbiStore D	1 x Dsp	Single Reagent Dispenser
1 x Car	HighRes NanoServe	1 x Cfg	Automated Plate Centrifuge



Description

This system is a HighRes NanoCell configured for acoustic compound delivery. This system is typically used for generating “assay-ready plates”, containing only nanolitres of compounds in DMSO.
The capabilities include plate-to-plate replication, cherry picking or dose response creation with the acoustic dispensing device. With an industrial robot arm at its center, this small platform is capable of hours of unattended operation.

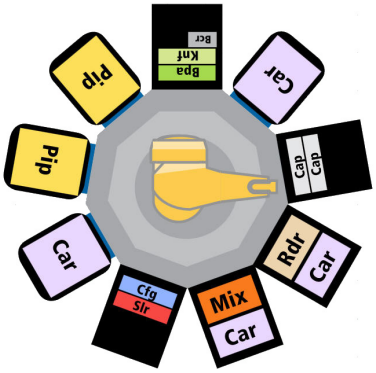
NanoCell Key Concepts

- Use the docks to reconfigure this compound delivery NanoCell with dispensers and plate readers to build a secondary screening NanoCell
- As liquid handling technologies change and evolve, you can undock older instruments from the system and swap them for new ones. The docking technology makes it simple to efficiently incorporate the latest technology advancements.
- Link this NanoCell to a second one at a later date to expand your system. For example, add a second acoustic dispenser if your compound output increases.

9-Sided MicroStar

Tube and Plate Processing

1	x	Rbt	Staubli Robot	1 x Bpa	Print and Apply Station
2	x	Pip	Liquid Handler	1 x Knf	HighRes MicroBlast
2	x	Car	HighRes AmbiStore D	1 x Cfg	Automated Plate Centrifuge
2	x	Car	HighRes MicroServe	1 x Slr	Automated Heat Sealer
1	x	Mix	Acoustic Mixer	2 x Cap	Tube Capper/Decapper
1	x	Rdr	Tube Auditor	1 x Bcr	Barcode Reader



Description

This system is a 9-sided HighRes MicroStar configured for tube and plate processing. This larger system would typically form the hub of a compound management group's operations. Equipped with classical liquid handlers, it is capable of performing tube reformatting/dilution tasks, and also plate to plate stamping to generate source plates for distribution to screening teams. The system can be tooled for use with specific storage technologies, e.g. Remp consumables, depending on the company's legacy equipment.

MicroStar Key Concepts

- Modify the format you are working with by docking in a different liquid handler cart – swap from disposable tip to septum piercing instruments as processing requirements alter
- Use the docking technology to implement "hot spare" carts. These carts, fitted with an identical device and methods, can be swapped into the system mid-run to replace a failed device and allow uninterrupted processing.
- Use device carts to transfer carousels full of prepared plates from this platform to a separate HighRes screening system
- Use device carts to transfer carousels full of cherry-picked tube racks from an offline compound store to this replication platform.