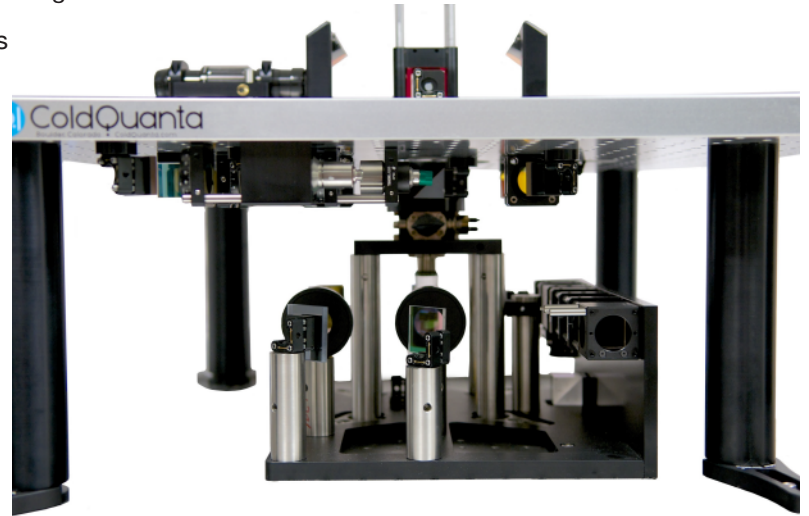


Physics Platform LASER COOLING OPTICS

Product

- Accessible layout for user applications
- Pre-aligned for rapid deployment
- Robust structure and integration
- FC/APC Fiber inputs



Product Description

The Physics Platform is a highly flexible complete opto-mechanical package to enable the production of cold and ultracold atom samples in a RuBECi or Double-MOT vacuum system. The platform consists of two stages: a 2D+ MOT for producing a two-dimensional (2D) magneto-optical trap (MOT) in the lower chamber; and a Six-Beam MOT Stage for creating a six-beam three-dimensional (3D) MOT in the science chamber. It also includes optics for optical pumping and imaging of cold and ultracold atoms in the science chamber. Like the Physics Station, the Physics Platform has excellent optical access, while the platform provides users with increased flexibility to modify and expand the optical system.

Product Specifications

Related Products

The Physics Platform is used in conjunction with:

Double MOT CUD-F20U-XXX
RuBECi CUR-F20U-XXX

Wavelength Options

767nm / 780nm / 852nm

Typical Laser Power Requirements

2D MOT: 40-70 mW. 3D MOT: 30-50 mW.
(5-10% as Repump)

Optical Inputs

Optical Pumping: <1 mW. Imaging: <1 mW.

Beam Dimensions (1/e²)

4x FC/APC fiber optic inputs

Imaging

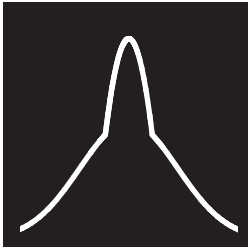
2D MOT: 15 x 22.5mm. 2D MOT+: 7.5mm.
3D MOT: 15.8mm
Pumping: 7.5mm. Imaging: 11mm.

External Dimensions

Absorption Imaging System (Optional)

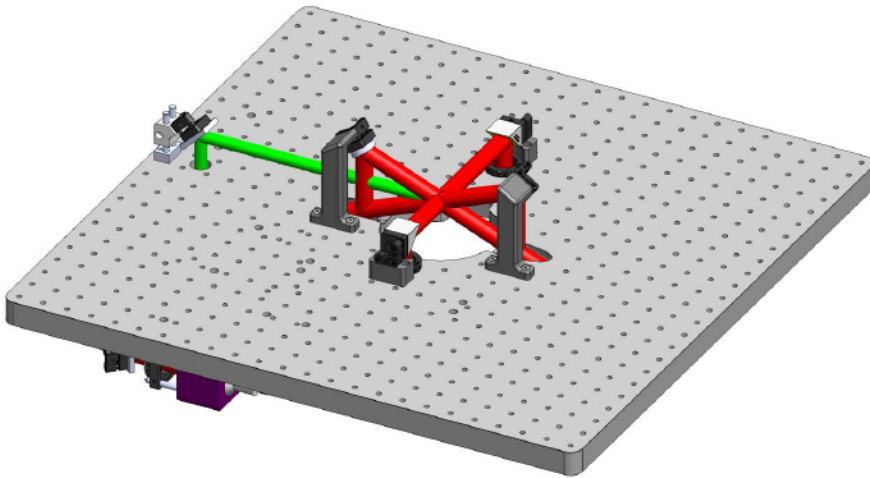
61x61x35 cm (24x24x14 in.)





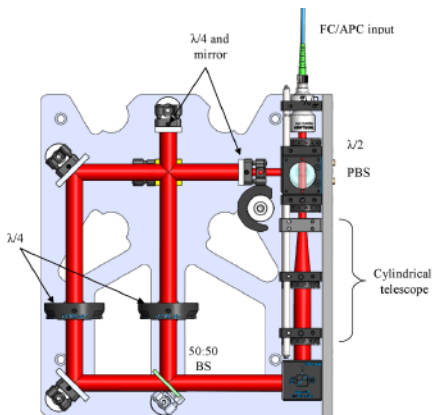
Physics Platform LASER COOLING OPTICS

Product Configuration



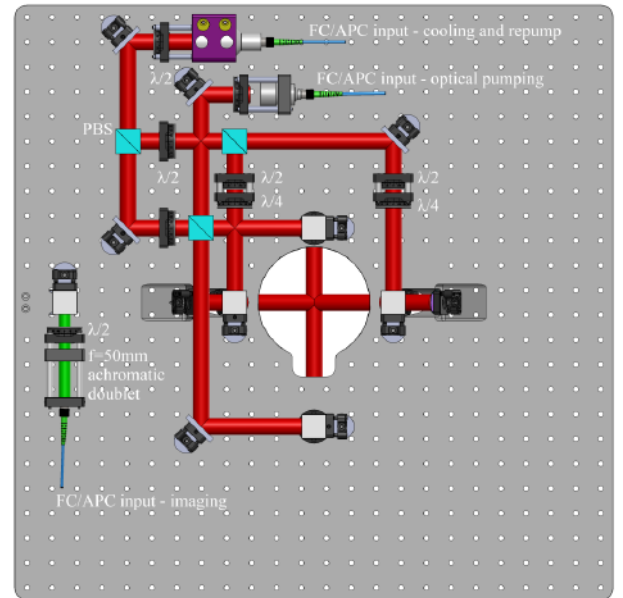
Level 3: 3D MOT, Optical Pumping & Imaging Beam Delivery

Housing all beam preparation on the underside leaves plenty of space around the 3D MOT cell to mount user applications.



Level 1: 2D(+) MOT Beam Delivery

Includes delivery of 2D MOT and push beams.



Level 2: 3D MOT, Optical Pumping & Imaging Beam Staging

Well engineered, multi-level system utilizes both surfaces of a single breadboard: Preparing and delivering the 6-beam MOT light, optical pumping beam and imaging beam.

