



attocube

WITTENSTEIN group



attoCMC

compact, rack mountable cryostat system

CRYOGENIC INSTRUMENTS

cool tools for cold science

Leap in compact & efficient cryogenics.

enabling industrialization of quantum technologies

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Turnkey Cryostat for OEM Applications

The compact cryostat package including the IGLU compressor requires no expert installation, and literally runs out-of-the-box: just plug it into a regular wall socket, and it automatically cools down to less than 3 K.

It streamlines the OEM application process by being controlled through simple commands, eliminating the necessity for external electronics or programming to control the cryostat functionalities.

Efficiency is a defining characteristic of attocube's Compact Mobile Cryogenics product line: The attoCMC is effortlessly adaptable to diverse environments while requiring minimal space and electrical power. This makes it the top choice for a broad spectrum of applications that demand cryogenically cooled sensorics, including SNSPDs, and quantum devices like single photon sources. Its ease of deployment and compactness makes it a scalable solution for various OEM applications and sets a new benchmark in cryostat technology.

Air Cooling & 19" Rack Form Factor

The attoCMC combines the IGLU compressor with a high-performance cryostat and is designed for straightforward integration into 19-inch rack systems. The low heat generation of the IGLU compressor allows the usage in most vented or climatized rooms without additional cooling infrastructure: it does not require cooling water or other external supplies besides the single-phase main power connection.



Easy User Access for Fast Integration

The attoCMC is easily accessible through a front-facing sliding coldspace, allowing swift integration and support, even when the system is rack-mounted. Additionally, versatile and easy-to-install feedthrough options minimize the time until the system is fully operational and provide flexibility to the user for his/her specific application.



Maximum efficiency
for 4K applications



- most compact full 2.3 K cryostat on the market
→ integration of cooled quantum devices in 19" rack systems
- air-cooled, low heat generation (1kW), single phase power
→ autonomous from special infrastructure
- fully automated cooldown & operation
→ user-friendly push button solution

System Description

self-contained compact cryostat	19-inch rack mountable, 10U
integrated air-cooled compressor	speed regulation - interface for remote control
sliding vacuum space for cold plate access	cryogenic vacuum

Temperature performance (base system)

base temperature	2.3K
cooling power	50 mW @ 2.8 K
integrated thermometer	(4-wire, connected to base wiring)

General Specifications

dimensions (including compressor)	446 x 443 x 641 mm, 17.5" x 17.5" x 25.25" main body in rack configuration, excluding backside connections
leak rate of vacuum	< 5e-9 mbar l/s
weight	approx. 100kg including compressor
country of origin	Federal Republic of Germany
feedthrough options	5 Feedthrough plates for wiring upgrades 2x KF25 flanges for additional fiber or wire integration

Electrical Specifications

maximum input power	< 1.4 kW
AC input voltage and line frequency	single phase 230 V, 50 Hz/60 Hz 110 V option with external transformer
remote operation	Ethernet interface (ADS and webserver)