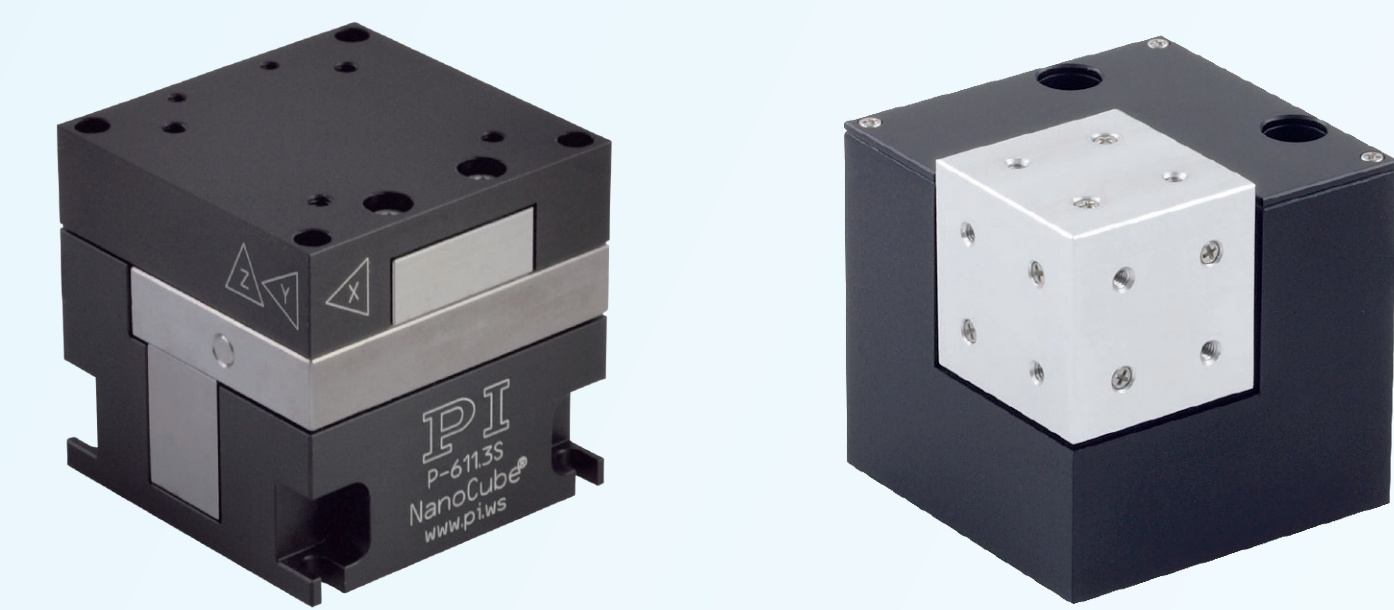
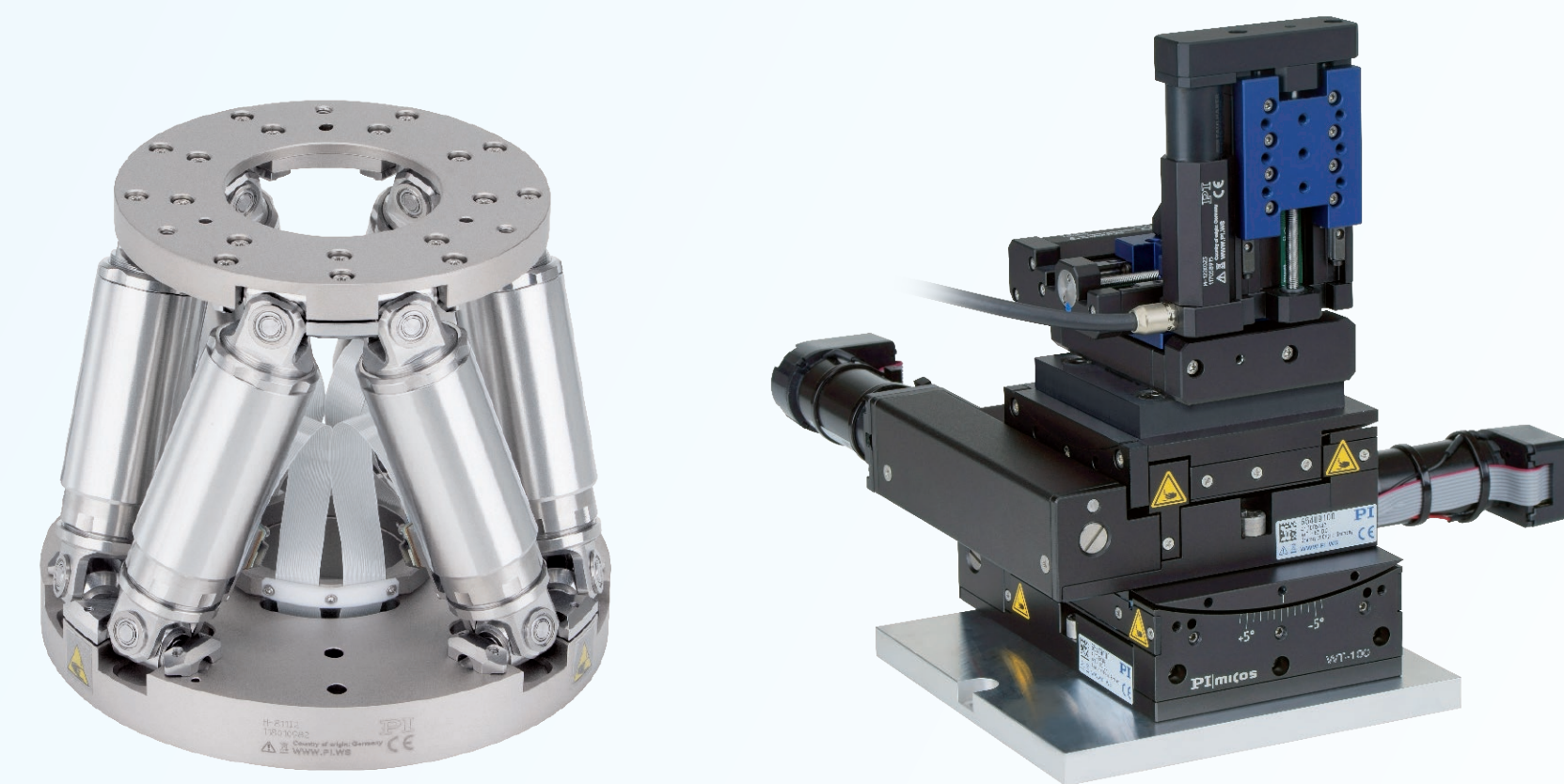


# Automated, Fast Multi-DOF Alignment

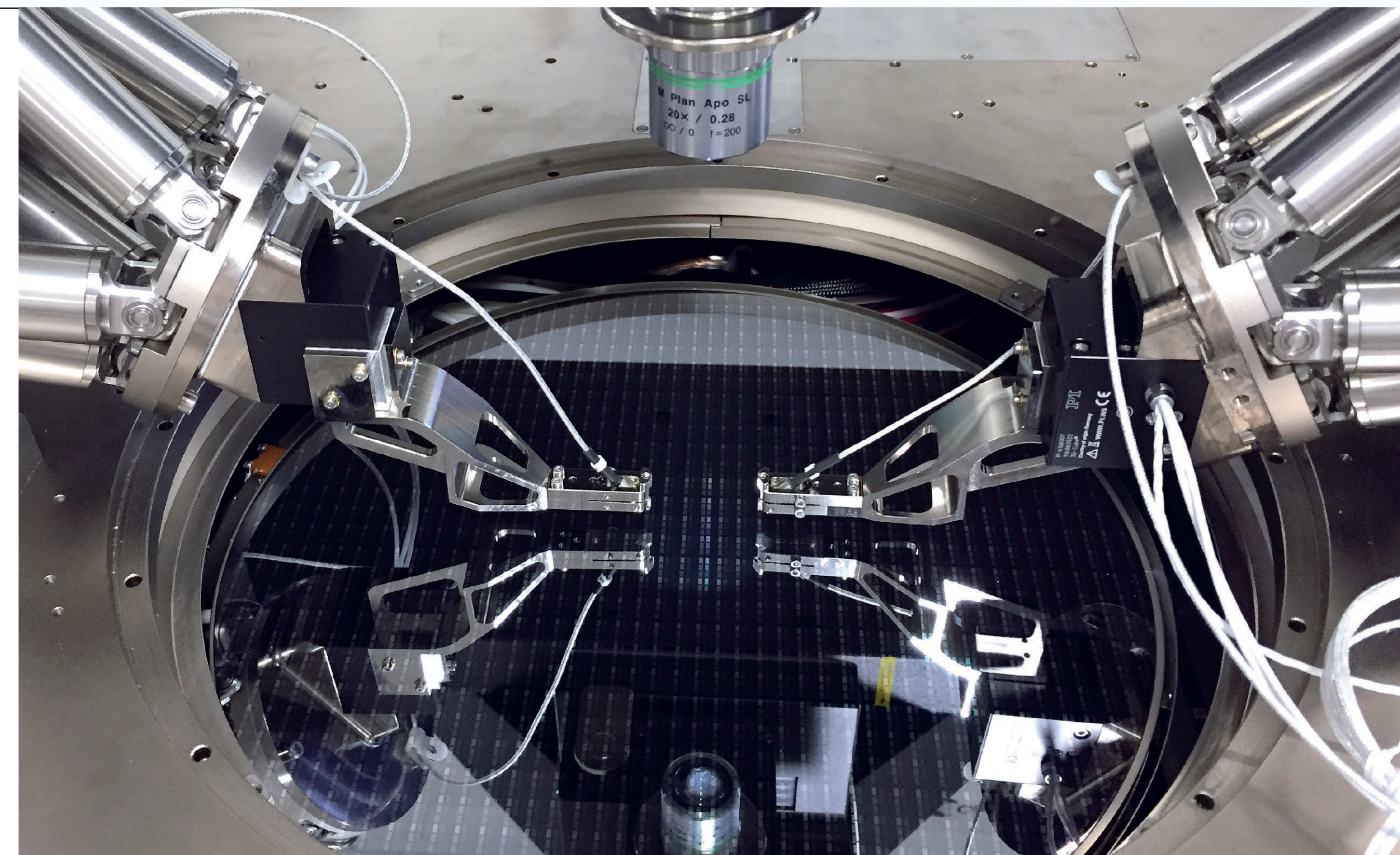
GAIN RELIABILITY AND SAVE DEVELOPMENT AND PROCESS TIME

## POSITIONING SYSTEMS

- 6 Degrees of freedom with hexapods or stacked motion systems for long travel
- High speed piezo scan/align system
- Allows for tracking capability to
  - Compensate curing stresses during packaging
  - Eliminate thermal drift
- Nanoscale resolution

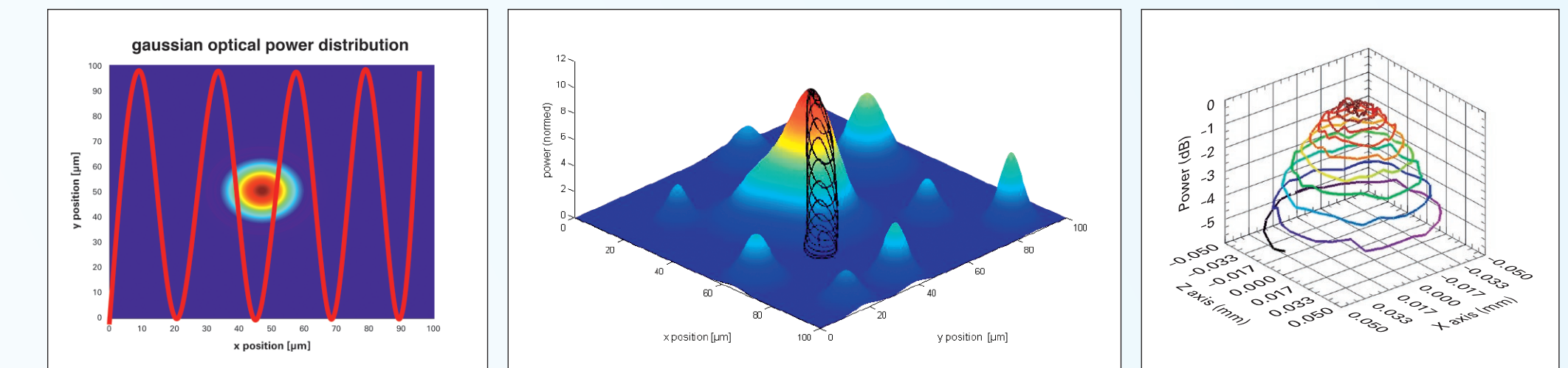


**18-Axis double alignment system provides fast NxM alignment of SiP devices in wafer probers. Cascade Microtech's pioneering CM300xi photonics-enabled engineering wafer probe station integrates PI's Fast Multichannel Photonics Alignment systems for high throughput, wafer-safe, nano-precision optical probing of on-wafer Silicon Photonics devices. (Image: Cascade Microtech, a FormFactor company)**



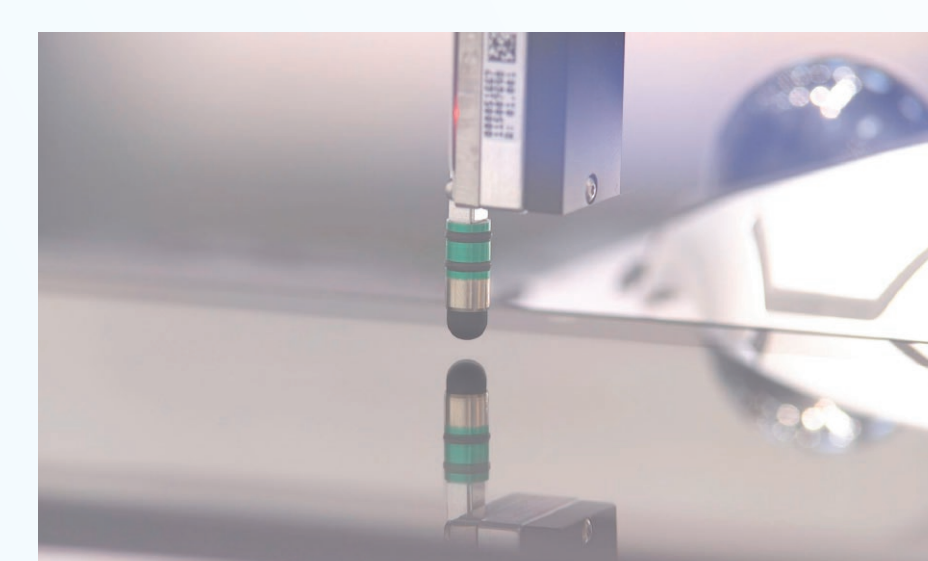
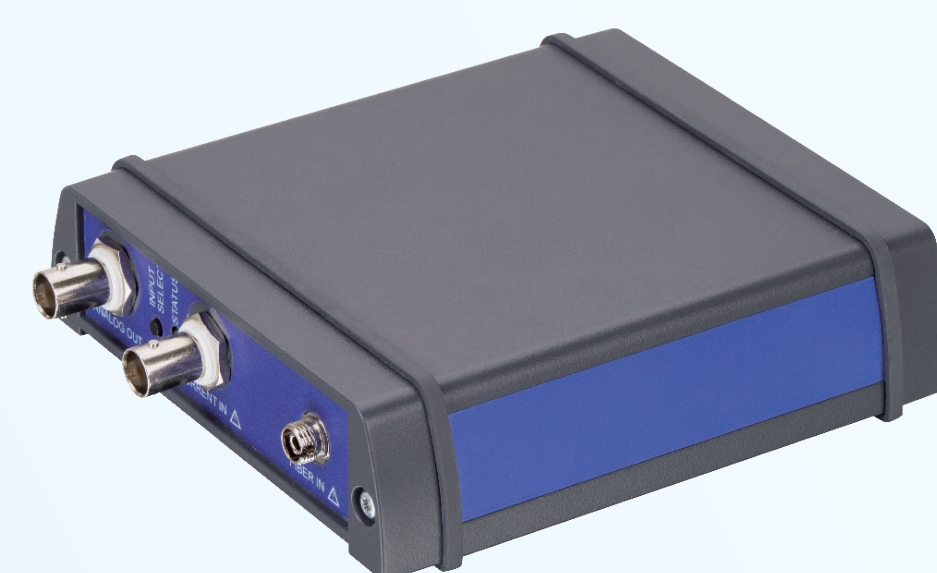
## MOTION CONTROL, FIRMWARE OPTIONS AND ALGORITHMS

- Parallel optimization across numerous channels and degrees of freedom
- Firmware routines for fastest peak finding
- Simultaneously aligning input, output, and multiple degrees of freedom
- Area scan algorithms, such as Spiral scan with constant angular or path velocity or sinusoidal scan
- Gradient search finds optimum uniquely fast
- Flexible Interfaces: Fast Ethernet/TCP-IP, RS-232
- EtherCAT® option for real-time synchronization



## OPTIONS AND ACCESSORIES

- Manual control unit
  - Independent positioning of all Cartesian axes
  - Velocity and step size can be set; motion stop and referencing
  - Display of the position of all Cartesian axes, velocity, errors or pivot point
  - Direct connection to the hexapod controller or PI MikroMove
  - Translate/rotate coordinate system anywhere
- Calibrated optical power meter
  - Large signal bandwidth of 20 kHz
  - High dynamic range
  - Wavelength range 400 to 1550 nm
  - Current input range to 1 mA
  - Logarithmic output
  - Force control option



## SOFTWARE RESOURCES

- Convenient API: Libraries for fast development in NI LabVIEW, Python, C++, Matlab, ...
- Supports various operating systems: Linux, macOS, Windows
- User software included in the package

