

LIGHTIGO

# 3-Axes Motorized Stage

Micrometer precision and automated software features

Do not waste your time with the manual sample movement, which is slow, inaccurate, and hardly repeatable.

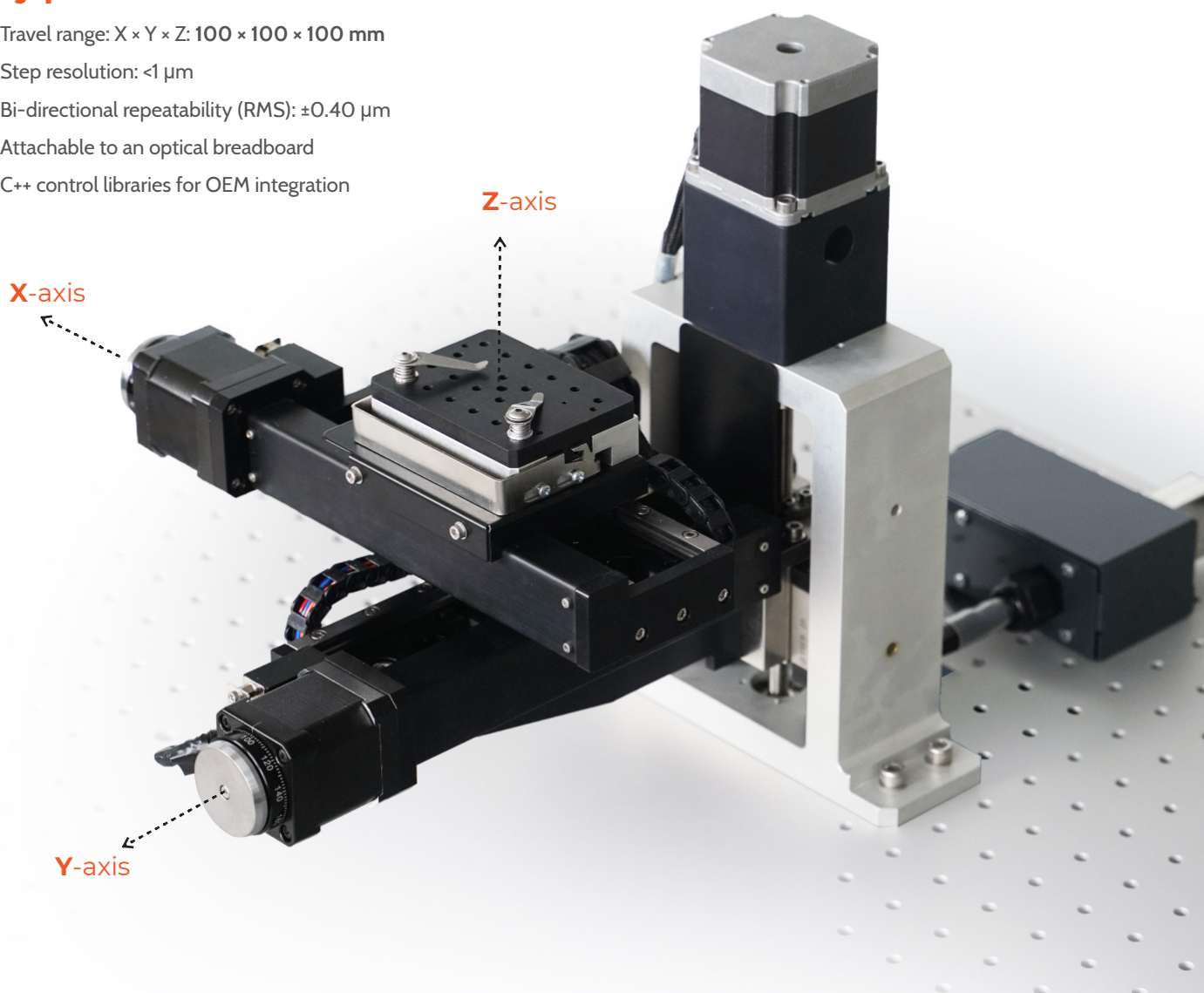
3-axis motorised stage is beneficial for any application where frequent sample movement is required: optical microscopy, analytical techniques (Raman, LA-ICP, XRF, LIBS, ...), material processing methods, and many others.

## Key parameters

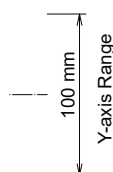
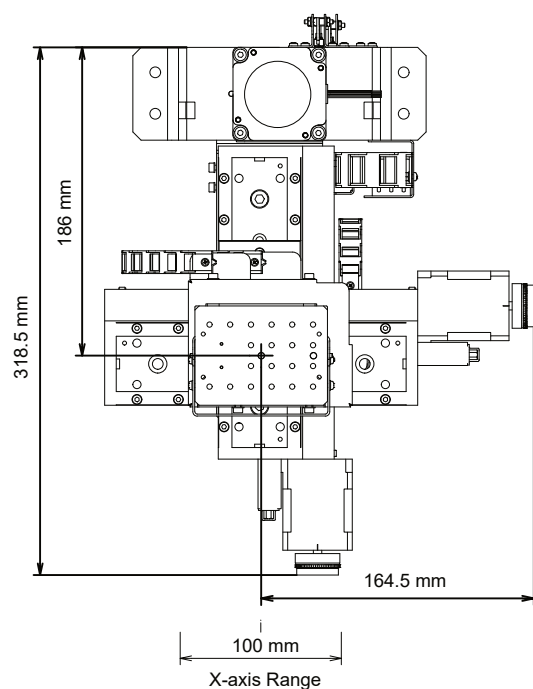
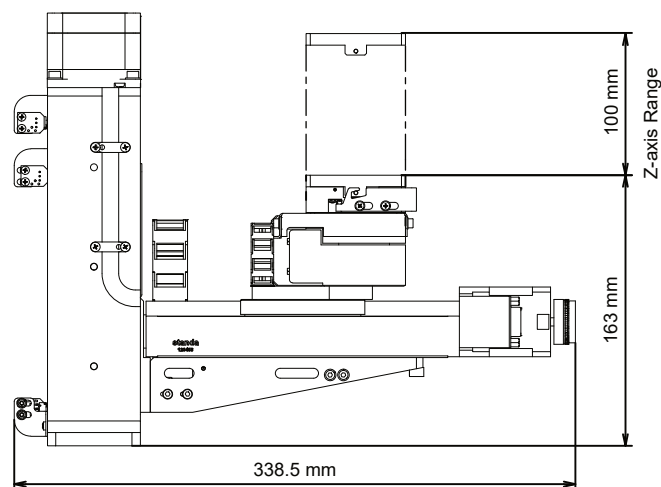
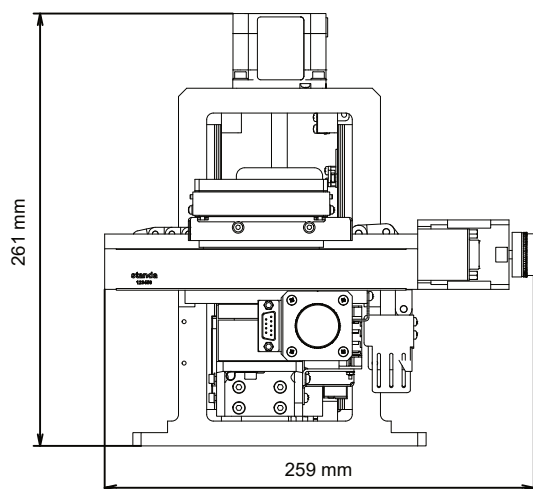
- Travel range:  $X \times Y \times Z$ : 100 × 100 × 100 mm
- Step resolution: <1  $\mu\text{m}$
- Bi-directional repeatability (RMS):  $\pm 0.40 \mu\text{m}$
- Attachable to an optical breadboard
- C++ control libraries for OEM integration

## Software features

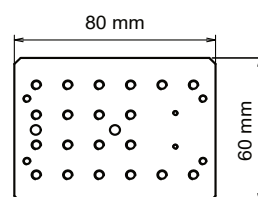
- Relative / absolute movement to a coordinate
- Automated movement to series of coordinates for mapping (chemical imaging)
- Batch import / export coordinates
- Wait time and Trigger-out after reaching set coordinate



# Dimensions



## Sample holder adaptor

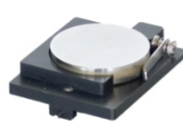


## Whats included?

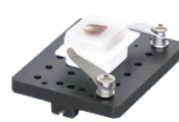
- 3-axes motorized stage
- Control electronics
- Control software
- Operation manual
- Sample holders



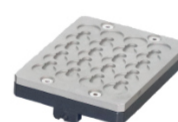
2x30 mm pellet holder



50 mm pellet holder



Universal clamp holder



12x12 mm pellet holder

# Control Software

Control the stage by typing in the **absolute** coordinates or push the buttons for the **relative** movement.

Control the stage interactively by **clicking** into the travel area (X and Y) and **dragging** the vertical slider (Z).

The screenshot displays the Lightigo Control Software interface, which is divided into several functional sections:

- Modules:** Located at the top, it includes icons for different control modes and a red **STOP** button.
- STAGE CONTROL:** This section features a circular directional pad for relative movement and input fields for absolute coordinates. The current coordinates are X: 29.562, Y: 13.950, and Z: 0.185 mm. It also includes a **GO** button and a **STOP** button.
- TRIGGERING:** This section allows setting the number of pulses (100) and the delay (500 ms) for triggering an external device, with a **TRIG OUT** button.
- TRAVEL RANGE:** This section shows a 2D grid representing the travel area (X and Y) and a vertical slider for the Z-axis. The Z-axis slider is currently set at 29.562 mm. A mouse cursor is shown hovering over a point on the grid with coordinates (17.521, -20.329).
- BATCH MOVE:** This section is used for setting up a series of coordinates for a batch move. It includes options for Mode (Map or Line), Corners, Size (X: 20, Y: 20 mm), Spacing (ΔX: 100, ΔY: 100 μm), and Pulses per spot (10). It also has checkboxes for Trigger-OUT and Trigger-IN, and a Wait time (500 ms). A **List of spots** table shows the starting coordinate (17.151 x -20.562), number of spots (192), pulses per spot (10), and overall pulses (1920). A **MOVEMENT progress** bar and a **Time estimated: 00:05:12** are also present.

At the bottom of the interface, a status bar indicates the connection: **Connected to MC-100 / SN: XVD-45-1.1**.

Set the series of coordinates, wait time on each spot and **Trigger** pulses for the external devices.