

# H101N1F / H101E1F

## Motorized flat top high resolution stage for upright microscopy

The H101N1F is a motorized XY stage for upright microscopes and is fully customizable for integration into OEM devices.

The most accurate and precise flat top stage, it uses a 1 mm pitch ballscrew and 200 step motor drive configuration to provide high resolution movement and improved straightness. The encoded H101E1F also uses 0.1  $\mu$ m linear encoders to provide exceptional long-range repeatability. Prior's patented Intelligent Scanning Technology (IST) optimizes stage accuracy and linearity.

A slim profile with a completely flat top plate allows easy access to the sample for loading and compatibility with a wide range of optics.

The H101N1F accommodates a variety of specimen types including glass slides, multiwell plates, semiconductor wafers, and metallurgical samples.



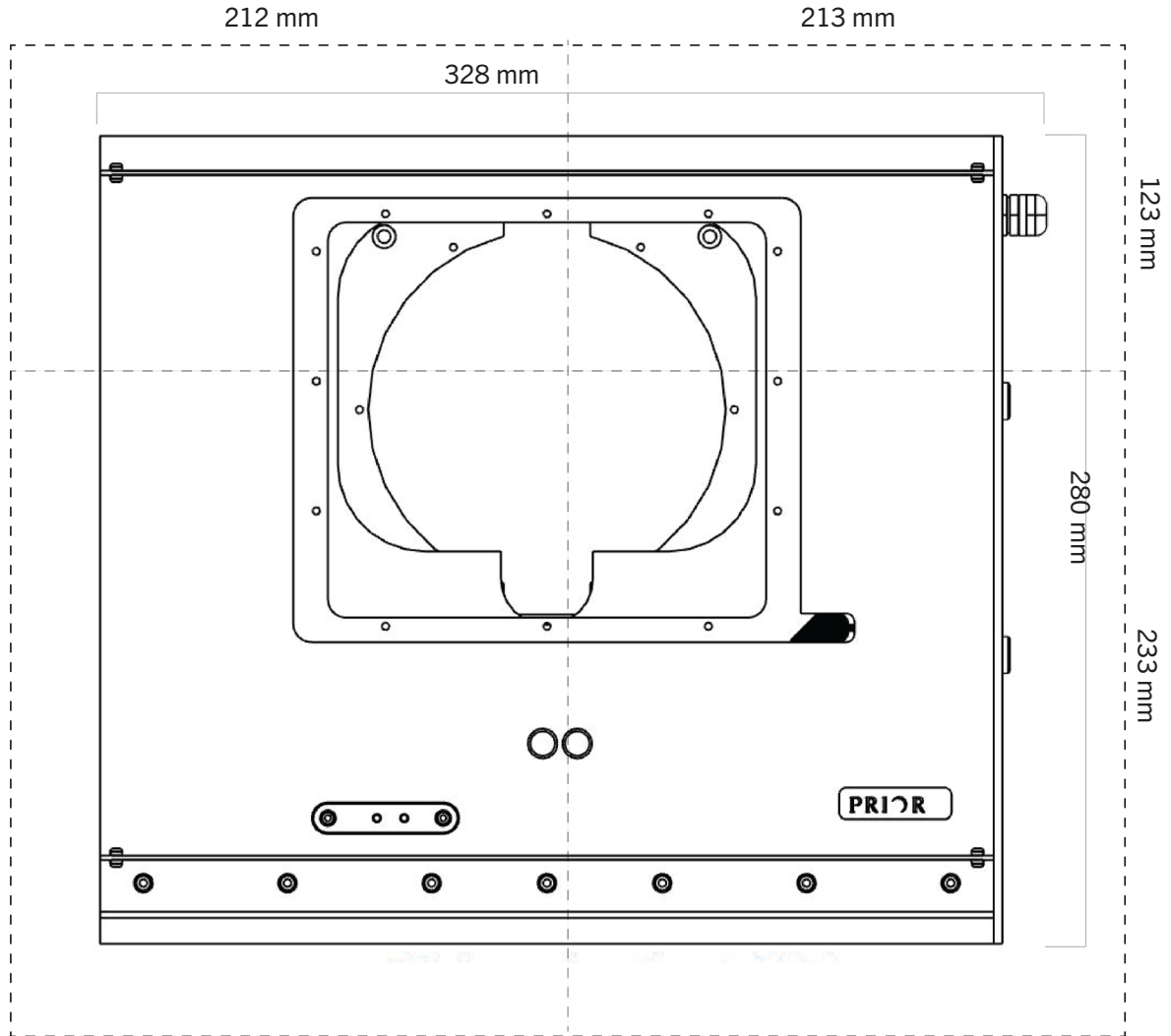
### Key Features

- Easy to integrate into customized imaging solutions.
- High step resolution and accuracy.
- Aesthetic and user-friendly flat top design.
- Intelligent Scanning Technology™ (US Patent 7,330,307).

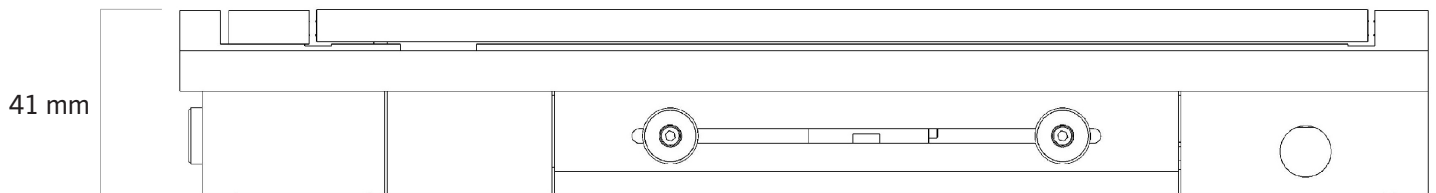
### Applications

- Confocal and super-resolution microscopy
- Fluorescence microscopy
- Metrology
- Slide scanning

## Dimensions\*



\*Outer dotted line shows the maximum footprint of the stage when at the limits of travel.



## Specifications

|                                           | H101N1F        | H101E1F                |
|-------------------------------------------|----------------|------------------------|
| Travel range                              | 114 mm x 75 mm | 114 mm x 75 mm         |
| Unidirectional repeatability <sup>1</sup> | <0.8 µm        | <0.3 µm                |
| Bidirectional repeatability <sup>1</sup>  | <3.2 µm        | <0.5 µm                |
| Metric accuracy <sup>1</sup>              | 0.12 µm/mm     | 0.08 µm/mm             |
| Full travel metric accuracy <sup>1</sup>  | <12.0 µm       | <6.5 µm                |
| Resolution <sup>2</sup>                   | 0.02 µm        | 0.1 µm                 |
| Squareness <sup>1</sup>                   | <25 arcsec     | <25 arcsec             |
| Maximum velocity <sup>3</sup>             | 30 mm/s        | 30 mm/s                |
| Maximum load                              | 10 kg          | 10 kg                  |
| Encoders                                  | No             | 0.1 µm linear encoders |
| Motor type                                | 200 step       | 200 step               |
| Screw pitch                               | 1 mm           | 1 mm                   |
| Weight                                    | 5 kg           | 5 kg                   |

1. As per Prior Scientific's test methodology, typical value.

2. Defined as the minimum motor step resolution for non-encoded stages, defined as the encoder resolution for encoded stages.

3. Defined as 2.5x the default velocity, true maximum velocity is dependent on sample mass.

## Ordering Information\*

| Part Number | Description                                                                                                                                                |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| H101N1F     | ProScan® stage for upright microscopes, with travel range of 114 x 75 mm, 1 mm pitch ball screw and 200 step motors.                                       |
| H101E1F     | ProScan® stage for upright microscopes, with travel range of 114 x 75 mm, 1 mm pitch ball screw and 200 step motors. Provided with 0.1 µm linear encoders. |

\*These stages can be adapted to numerous commercial microscopes. See our website, or contact Prior, for a full list of options.

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