

# First EIE SA

## General specifications EDI300Dual

<b>Dual Exposure unit</b>	Max. image size (x2)	690 x 590 mm (27.2" x 23.2")	•	
	Max. panel size (x2)	710 x 610 mm (28" x 24")	•	
	Min. panel size (x2) with automation	250 x 150 mm (10" x 6")	•	
	Panel thickness	0.1 to 10 mm (0.004" to 0.4")	•	
	Panel holding	First EIE Vacuum table First EIE Panel clamping system	•	
<b>Optical Engine</b>	Technology	DMD with advanced UV Lens	•	
	Light source type	Very High Pressure arc lamp	•	
	Light spectrum	365 to 450 nm (UV-A)	•	
	Exposed energy	4 to 3000 mJ/cm <sup>2</sup>	•	
<b>Photo-imageable Substrate</b>	Type	Compatible with all used etch resists Compatible with all used solder masks Compatible with photo-imageable Legend inks UV-sensitive silver halide films	•	
	<b>Built-in Raster Image Processor</b>	Data input formats	RS274D, RS274X, DPF and EIE RPL	•
		Optional input formats	ODB++, PostScript, TIFF-PACKBITS, PDF, AI (ADOBE ILLUSTRATOR)	•
		Network compatibility	Network File System TCP-IP	•
<b>User Interface</b>	Operator-friendly user interface with touch panel		•	
<b>Calibration</b>	Automatic diagnostic and Calibration		•	
	Automatic registration and side alignment with on-board CCD camera		•	
<b>Panel Alignment and Registration</b>	Local scaling		•	
	Real rotation axis system for image to panel offset compensation		•	
	<b>Geometrical Accuracy</b>	± 2 µm	•	
<b>Minimum Line Width</b>	20 µm (0,8 mil)		•	
<b>Repeatability</b>	± 0,5 µm		•	
<b>Operating Conditions</b>	Temperature relative humidity	20 ± 2°C - rh50% ± 10% (non-condensing)	•	
	Power requirements	Single phase : 85 - 265 VAC / 47 - 63 Hz, 2000 W	•	
	Compressed air Dry and oil free	Minimum : 6 bars, 56l/min (90 psi, 2 cfm)	•	
<b>Size and Weight</b>	Width x Depth x Height	1700 x 2700 x 1450 mm	•	
	Weight	2400 kg	•	
<b>Panel Pack</b>	CAM Software to EDI300Dual data automatization for minimal operator interaction		<b>Option</b>	
<b>Serialization Dynamic Data</b>	Serial numbers, time-code, barcodes 1D or 2D (QR-Code, DataMatrix and others) by D-code mapping		<b>Option</b>	

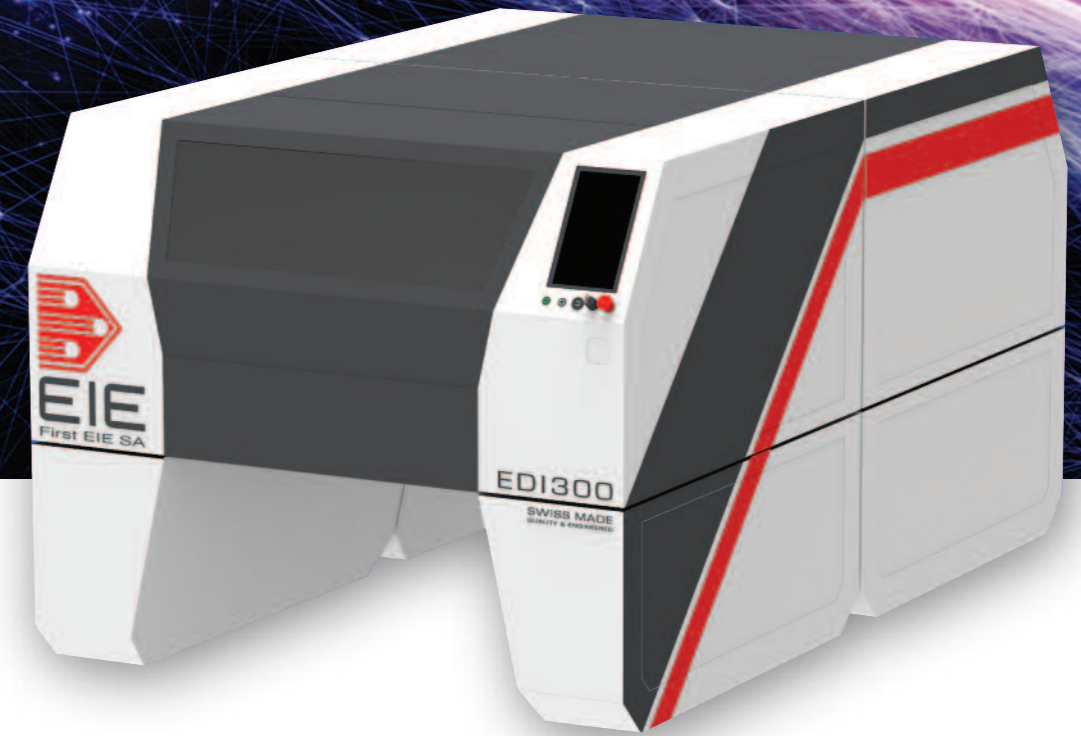
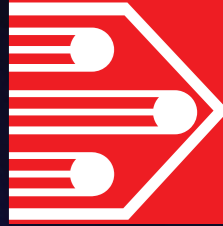
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- Accuracy
- Auto calibration
- Reliability
- Productivity
- Dry film and Soldermask

# First EIE Direct Imager

## EDI300Dual

Compact automation



**SWISS QUALITY**  
Twice 710 x 610 mm 28" x 24"



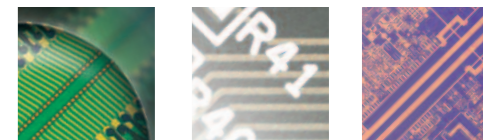
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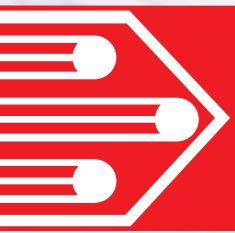


The True Figures



The True Figures

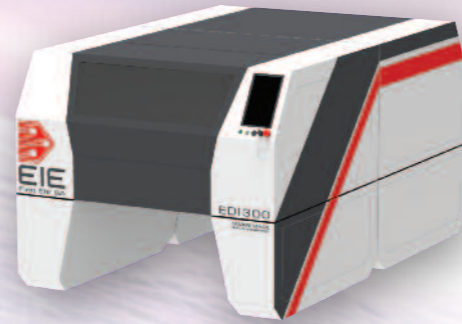




# With **First EIE** : Imaging as you Imagine™

These New Direct Imager series **benefits from First EIE Outstanding expertise in Imaging technologies**, from Photoplotting to Inkjet Printing solutions.

An equipment that will address all requirements of production shops at a **competitive price**.



Developed in **close collaboration** with our partners, our new Direct Imager series integrates an industry proven DMD Optical Head, which is based on TI's **DLP chip** with a dedicated active thermal management to improve **DMD life time**. The specifically designed optical lens is optimized to offer the highest image accuracy.

The EDI300Dual benefit from **4 years of experience with First EIE Direct Imaging process**. Using the proved First EIE UV Light engine, accurate registration system, and data processing. This new model that integrate the latest hardware and software technologies, and propose an innovative multi mode concept in terms of panel handing from manual to full-automatic loading and unloading.

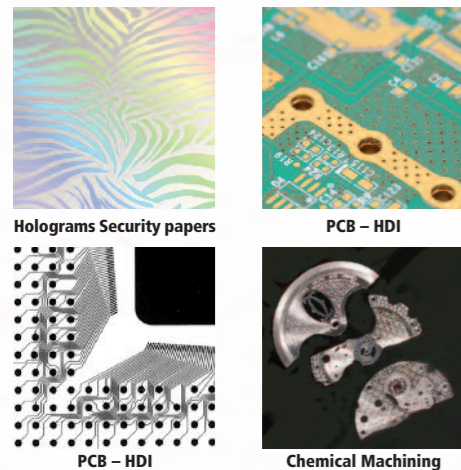
## New Mechanical Design

- Granite base with Linear motors for stability and accuracy at high speed exposure.
- Real rotation axis system for image to panel offset compensation.
- Reverse mechanical clamping table with vacuum.
- Real time autofocus with double Laser following System that improves **the optics positioning for better line width accuracy** in bidirectional exposure.

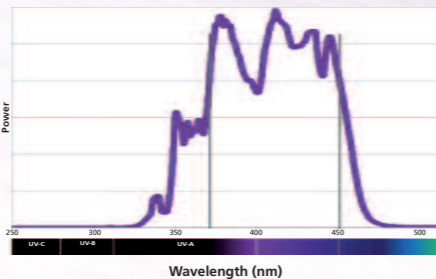
## Versatile

The EDI300 Direct Imager is able to adapt or be adapted to **many different applications**. Thanks to :

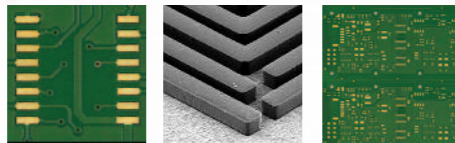
- The new illumination system able to catch targets of difference substrate finish Brushed, polished or chemical cleaned.
- The table with vacuum and automatic clamping is able to keep the panel flat.
- Multiple Data formats compatibility.



## Established High Power UV Source



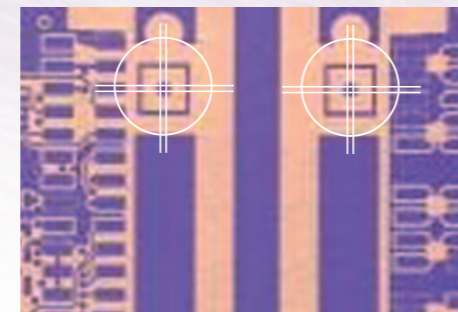
Broad UV spectrum, **from 365 to 450 nm** makes it compatible with all industry standard. From Etch Resists to Solder Masks and Legends inks can be exposed.



« I am very happy with this equipment. Now, I am sure that the light engine with the broad wavelength spectrum has many benefits for my exposure process with dry films, in particular with solder mask. I have seen a significant difference in the quality and finish of direct imaging as well as conventional mask exposed with the First EIE Direct Imager due to the broad UV spectrum. The exposing time with the direct imaging mask is quite impressive. »

Customer testimony

## Registration/Alignment

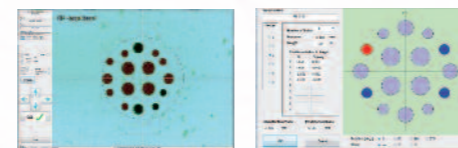


- **Automated A/B sides registration** an scaling using image recognition with high resolution CCD Camera.

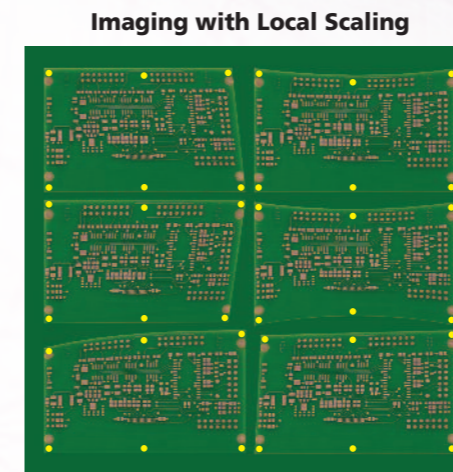
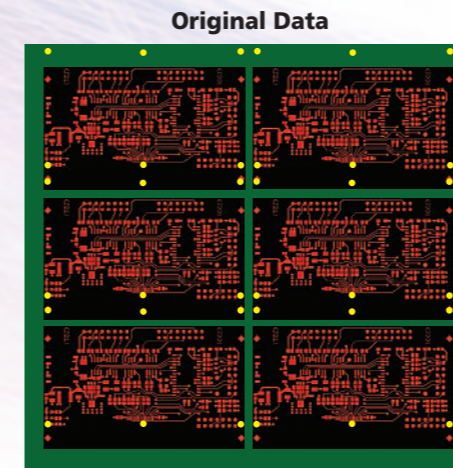
- New illumination system able to catch targets of difference substrate **finish, Brushed, polished or chemical cleaned**. As option a special detection system is available to detect target covered by solder mask

## Composite target.

To align a single image to multiple sets of hole patterns that have been drilled at different times with potentially different scaling and coordinate origins.



## Local Scaling Option



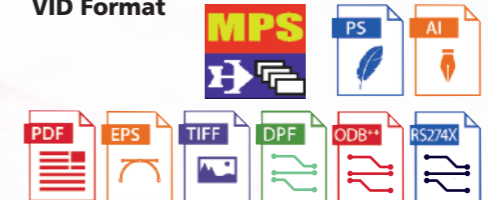
## Software Solutions

The EDI300Dual MPS software offers a operator friendly interface with superior flexibility, based on Win10 - LTSC - 64 bits, It brings to the system the vast experience of First EIE in file management and data processing.

**Panel Pack** from CAM to Panel in two clicks.



Supported data formats with direct input and conversion to the First EIE VID Format



## NEW Electronic Design

**EtherCAT** With the new **Ethercat and Ethercat Safety Technology** the EDI300Dual brings a modern and evolutive architecture for accurate and stable motion control.

Up to date development and diagnose tools for long life support.

Down times and trouble-shooting are reduced to the minimum.



## Auto-diagnostic Predictive Maintenance

The EDI300Dual performs **automatic calibrations especially** for Energy level and Geometry accuracy.

The EDI300Dual is **CFX** (Connected Factory Exchange) **IPC-2591 compliant**, and can be customized to customers organizations. That provide efficient tools for continuous process survey and preventive maintenance.

## Automation : In line Dual Exposure - Integrated flipping system - Multi modes - Ready for full Autoloading and Unloading

