

**NOTION**  
S Y S T E M S



**n.jet 3D**

# TECHNICAL INFORMATION



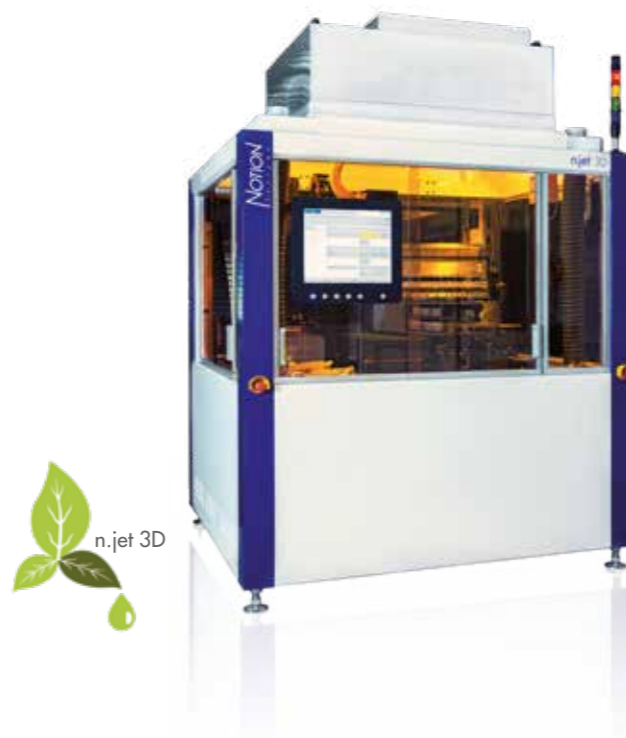
## 3D PRINTING

High precision multi material jetting opens up new opportunities for 3D printing in various industries. Mixing materials voxel by voxel for advanced optics, 3D electronics or microsystems technology. The n.jet 3D is an open platform for 3D printing gives you full control of your 3D printing process.

Select one or more materials from our material partners or use your own material. We'll help you select the right printhead and post processing and provide you with an integrated, industrial solution for production of 3D parts.

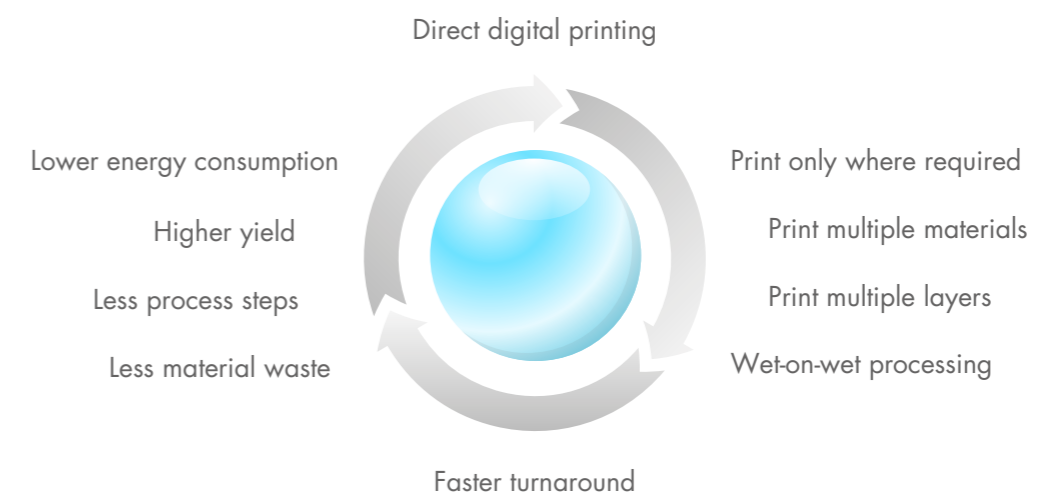
### Applications:

- Advanced optics
- Precision parts
- Hybrid manufacturing



Inkjet is a non-contact, digital printing technology which creates fine structures of 30 microns and below. Non-contact printing enables wet-on-wet processing of substrates and the fully digital process makes masks or screens obsolete. Inkjet is a highly integrated printing method, where several thousand nozzles are utilized to print at production speeds of up to 2 meters/sec.

Inkjet is used to replace established subtractive process sequences and reduces waste, energy consumption and makes electronics production more ecological and more economical at the same time.



# n.jet 3D

## Main Features:

- Multi material jetting
- High viscosity jetting
- Supports all major printheads
- Drop watch & drop formation analysis
- Full access to all jetting parameters
- Open slicer interface
- Optional inert atmosphere



## CUSTOMIZED PROCESSES

- Customized process for outstanding 3D printed parts
- Custom selection and number of printheads
- UV-pinning and curing lamps that best match material
- Supports Xaar, Konica-Minolta, FujiFilm and Ricoh print heads
- Process scale-up support from experienced Notion process engineers



### Example optical lenses

The production of optical lenses with an n.jet 3D system is much more cost-effective than the production of lenses in conventional manufacturing processes. The additive manufacturing process saves more than 30 production steps and reduces scrap by up to 90%.



## OPEN MATERIAL

- Free choice of material from pre-qualified suppliers
- UV-curables , hotmelts, nanomaterials, ...
- Extended processing window for Xaar high laydown process
- Integration of client materials

## HIGH PRECISION & HIGH PERFORMANCE

- High precision n.jet platform yields best quality 3D parts
- On demand, large number of printheads lead to short 3D build times

## DROPWATCH (OPTIONAL)

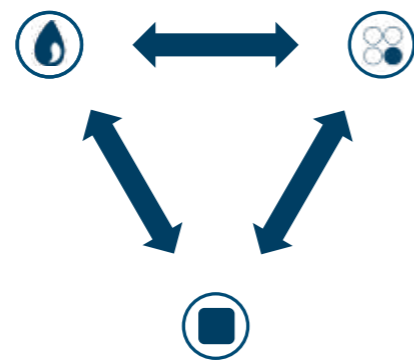
- Real time drop watch for inkjet printheads droplets
- Measurement of drop volume, speed, etc.



Notion's process & engineering team relies on decades of expertise in scaling up functional inkjet processes to industrial production. We support our end users and partners in all aspects of print process development: printhead, ink, substrate, and all intricate interactions involved.

**Application support includes:**

- Compatibility tests
- Printhead selection support
- Ink selection support
- Print process development
- Pre- and post-processing support
- Process training



Notion supports the optimization of your process and fine tunes the relationship between the substrate, ink printhead and application.



## OPEN PLATFORM – OPEN COLLABORATION NETWORK

Our collaboration with leading printhead manufacturers and material providers continuously extends the process range of inkjet in 3D printing. Jetting materials that never have been jetted before are used to print parts with final part properties that set new standards in material jetting. Become a part of our open network to realize your 3D printing application.

Xaar's high laydown jetting allows to print materials at viscosities 5 times higher than the formerly generally accepted limit for inkjet printing. BASF uses this extended process window to develop new jetting materials that improve final part properties. Both partners are stretching the limits of 3D inkjet printing of precision parts on Notion's n.jet 3D platform.



Cooperation partner for 3D printing materials.



# NOTION

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## THE FUTURE OF ADDITIVE MANUFACTURING

### DISPLAY

n.jet display RGB

n.jet display TFE

### ELECTRONICS

n.jet soldermask

n.jet etchresist

n.jet roll2roll

### SEMICONDUCTOR

n.jet photoresist

n.jet hybrid

### 3D PRINTING

n.jet optics

n.jet lab