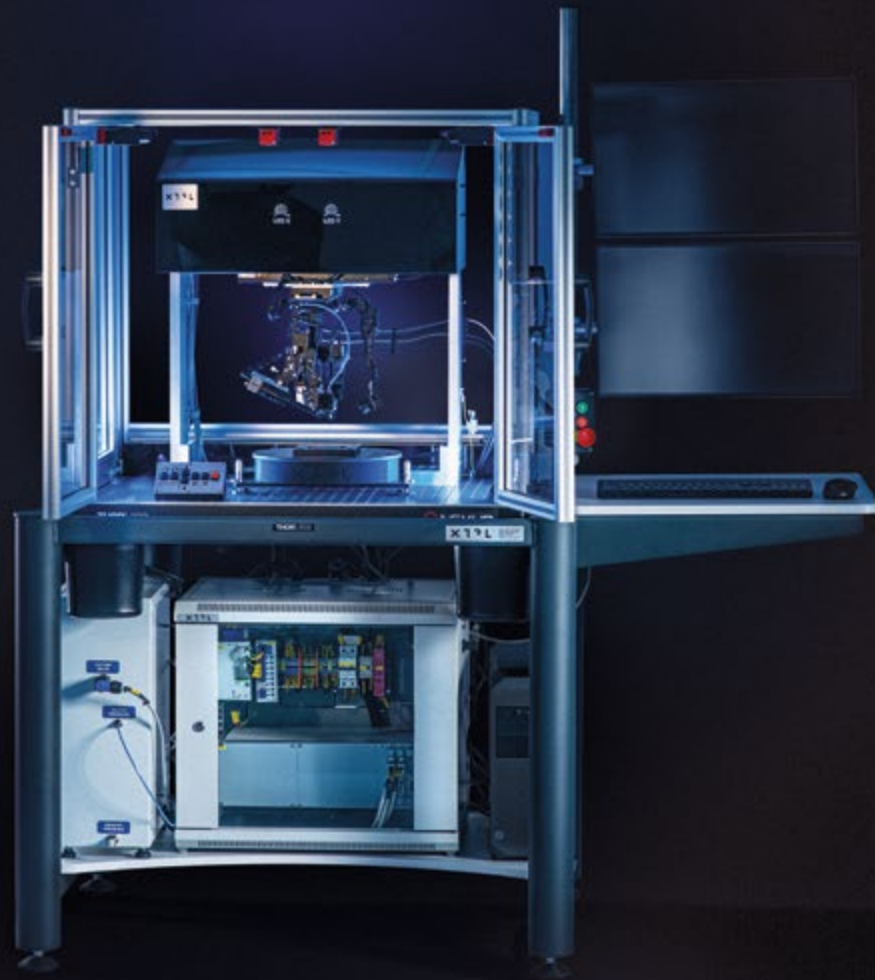


XTEL[®]

Delta Printing System



First truly additive method for printing
single micron functional structures

Award
Winning
Technology



The 27th
International Display Workshops
IDW '20



Benefits of Delta Printing System

- Features sizes down to submicron scale
- Wide range of material support
- Printing on heterogeneous materials and 3D topographies
- Uniform & clean features geometries: no overspray, high linewidth homogeneity
- Fast & easy exchange of cartridges & nozzles
- Only 0.1 ml of ink required to start printing
- Up to a 100% ink utilization

Ultra-precise Dispensing (UPD) technology?

- Ultra-high-resolution printing on various substrates
- High viscous materials along with small feature sizes
- High aspect ratios just after a single pass
- Wide range of printable materials: Metallic nanoparticle inks and pastes, Quantum Dot inks, Dielectrics, Polymers, Photoresists, Organic, Liquid metal alloys and more
- Uninterrupted interconnections on highly complex topographies

Revolutionize your industry with the power of UPD



Semiconductors

- High precision with submicron feature size.
- A wide range of materials supported for varied semiconductor fabrication needs.
- High aspect ratios, ideal for conductive power interconnections.
- Quick process enhances efficiency and ensures uniform, reliable end products.
- Printing on complex 3D surfaces More-than-Moore devices.



Flexible Hybrid Electronics

- Superior precision for Flexible Hybrid Electronics manufacturing.
- Reliable 3D chip interconnections directly on vertical slopes.
- Conductive and non-conductive materials for complex circuit patterns and reliable interconnections.
- High aspect ratios in a single pass.
- Uniform, clean geometries promote FHE device performance and RF capabilities.



Biosensors

- Biosensing pattern fabrication on flexible substrates, vital for wearable sensors.
- Functionalized materials to prototype biosensors targeted at specific markers.
- Unparalleled precision for swift biosensor prototyping.
- Ability to print structures through different type of microchannels.



Displays

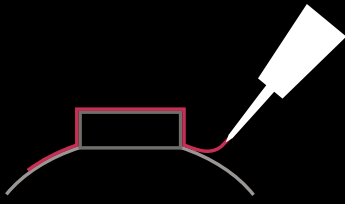
- Ultra-high resolution printing for OLED and microLED displays.
- Precision ideal for precise interconnections, microcavities filling and defect repair,
- Dispensing of different elements of display architecture like color conversion layers and interconnectors
- Single-step, high-precision additive process increases yield and reduces production time and costs.



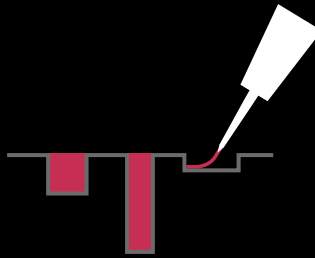
Printed Circuit Boards

- A wide variety of materials facilitating specific PCB structure creation and integration.
- High aspect ratio structures in a single pass.
- Printing on complex 3D

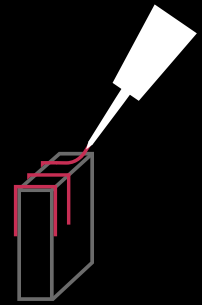
Dive into Innovation: Unleash the Power of Our Technology!



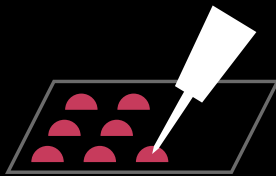
Chip interconnection
on flexible substrate



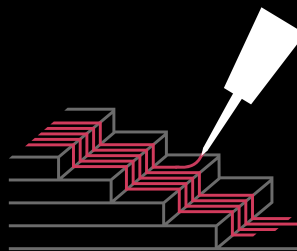
Filling the microwells
and TSV



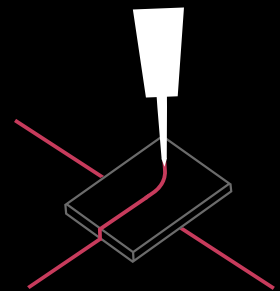
Edge interconnections
printing



Microdots dispensing



Stacked Chips
interconnections



RDL Prototyping

Why should you choose our technology?

Open platform
for prototyping

- Versatile technology for a range of R&D applications.
- Diverse resolutions.
- Expanding library of materials.
- Adjustable parameters.
- Continuous R&D innovations.

Reliable, Repeatable,
and Durable Results
for Specific Materials

- Groundbreaking precision with high-resolution 3D printing – guaranteed 1µm line printed during setup
- Extensive compatibility with high-resolution third-party inks.
- High precision and flawless uniformity in your printed traces
- Unmatched electrical conductivity in printed traces, validated by pre-delivery and field-based proof-of-concept

Easy to Operate
and Maintain

- Seamless printing with our intuitive and simple-to-set printing parameters.
- Straightforward, rapid procedure for cartridge and nozzle installation.
- No need for post-printing cleanup.
- Delta design ideal fit for any setting.
- System updates and new features development.

Hear more about UPD from industry experts

Prof. Norbert Fruehauf, Director of IGM at University of Stuttgart

"The XTPL's ability to directly dispense (in a mask-less approach) electrically conductive structures in the minimum feature size range of 1.5 – 10 micrometers is unique. In my view the XTPL's ultra-precise dispensing technology offers truly unique properties, which are an excellent fit to the future needs in the field of printable high-resolution and foldable OLED displays."

Prof. Ravinder Dahiya, The Leader of the Bendable Electronics and Sustainable Technologies (BEST) Research Group at Northeastern University

"Our research revolves around the development of high-performance printed electronics and sensing systems on large area flexible substrates. We used these printed systems to develop flexible electronic skin (eSkin) and explore its application in healthcare, wearable systems and robotics. In our projects we also use micro/nanofabrication tools and align them with processing on flexible substrates. We decided to purchase the Delta Printing System for our labs, after performing initial tests with the team at XTPL over the last several months. This appears to be a great enabling tools and we are looking forward to including it in our daily research work."



Contact our team

✉ sales@xtpl.com

XTPL is a globally innovative company developing breakthrough, additive manufacturing technology for ultra-precise printing of nanomaterials.

Contact us for more details.

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