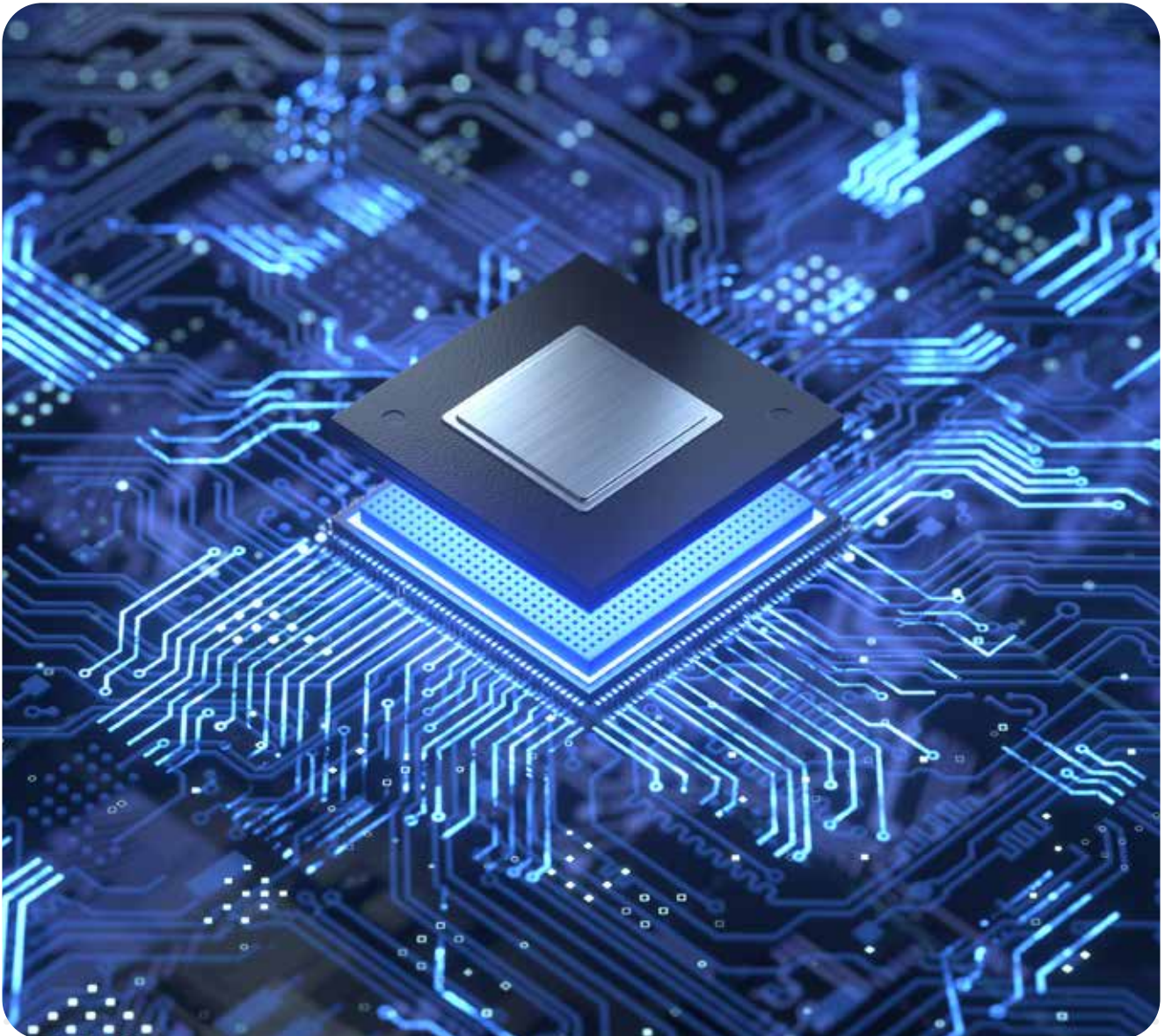


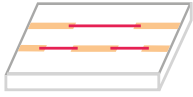
TECHNOLOGY

# Ultra-Precise Dispensing Technology



## Key features

XTPL Ultra-Precise Dispensing (UPD) technology offers an unparalleled set of features that are not available in any other additive method. These include high-resolution printing (down to submicron feature size), the ability to use high-viscosity materials (up to 1 000 000 cP) and precise printing in 3D. The combination of these features makes it possible to achieve capabilities that were previously impossible with any other additive method.



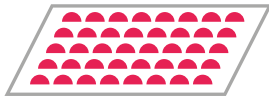
## Open defect repair

- Dispensing of ultra-high resolution features:  $< 1 \mu\text{m}$
- Photonic sintering enabling resistance:  $< 1\Omega/\mu\text{m}$
- Materials compatibility



## Edge interconnections

- High resolution traces, below  $< 10 \mu\text{m}$
- Possibility to print over the edge of glass, silicon and flexible foils



## Microdots dispensing

- Microdots printing
- Excellent height to width aspect ratio
- Capability to use conductive and non-conductive adhesives



## Filling of microwells and TSV

- Precise filling of microlavities, high aspect ratio vias, microwells
- Variety of materials like: conductives, dielectrics, photoresist, quantum dots
- Use-cases like QD color conversion, high-density TSV, RDL interconnection, sacrificial layer in MEMS fabrication



## Printing through microchannels

- Printing structures across different types of microchannels
- Direct dispensing of conductive electrodes or photoresist (ex. SU-8)
- Fast and reliable solution for microfluidic, med-tech and MEMS



## Redistribution layer prototyping

- All printed RDL structure
- Down to  $1 \mu\text{m} / 1 \mu\text{m}$  L/S density
- Variable materials possible to use in one system, for example metallic nanoparticle paste and high viscous polyimide



## 3D micro-electronics printing

- Directly on vertical step
- No ramps needed
- Reliable connection for flexible hybrid electronics and advanced IC packages



## High-frequency structures

- High resolution antenna on-chip
- No satellite droplets and high uniformity to prevent high frequency signal losses
- Wire-bonding interconnection alternative

## Contact our team

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