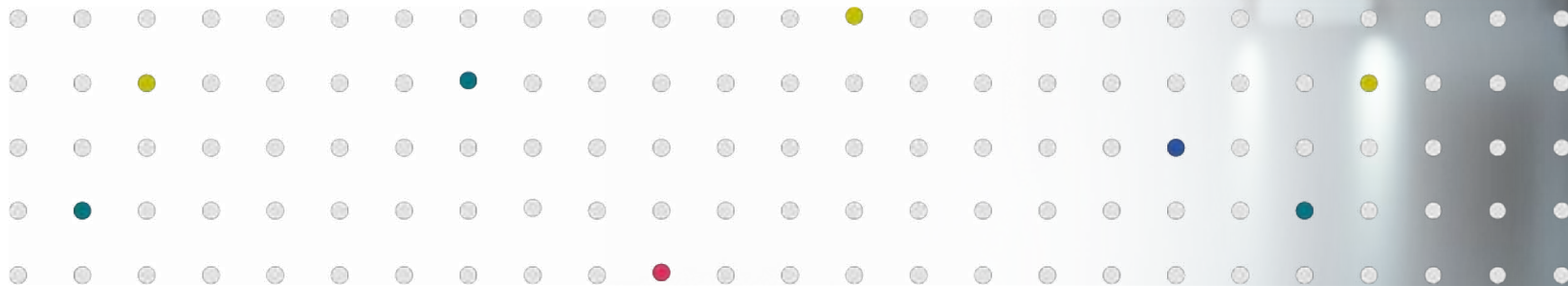




Powering the microelectronics of tomorrow

Company overview



01

XTPL at glance

Company at glance



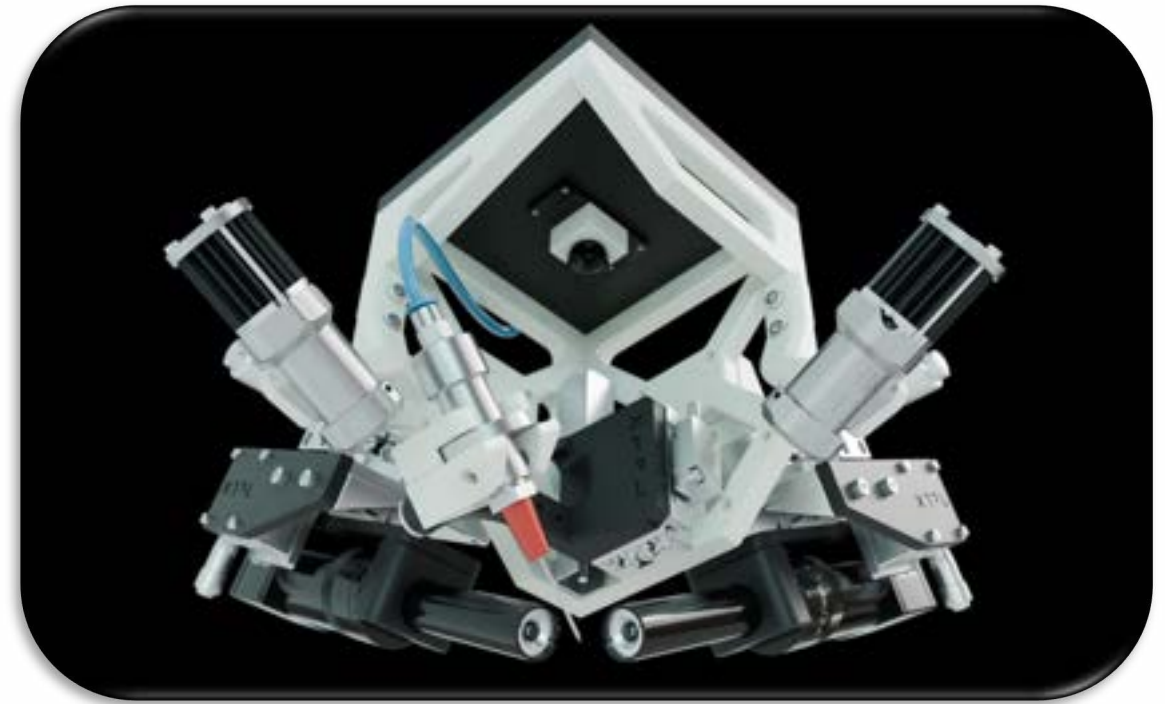
- Established in 2015
- HQ in Wrocław, Poland
- XTPL Inc. office in Boston, USA
- 12 distributors worldwide
- Publicly listed on WSE (2019) and FSE (2020)
- Interdisciplinary team of 80 professionals, including PhD researchers and subject matter experts
- IP consistently built through an expanding global portfolio of 43 patents



Company at glance



- Ultra-Precise Dispensing Systems for:
 - > industrial applications
 - > R&D – Delta Printing System
- Conductive nanomaterials for microelectronics



XTPL vision statement



Leading the evolution of microelectronics innovation to deliver sustainable, transformative, and reliable solutions that empower businesses and society in a connected world.

XTPL mission statement



deliver innovative solutions to meet evolving needs in additive manufacturing and miniaturization

provide state-of-the-art dispensing technology that complements traditional manufacturing methods

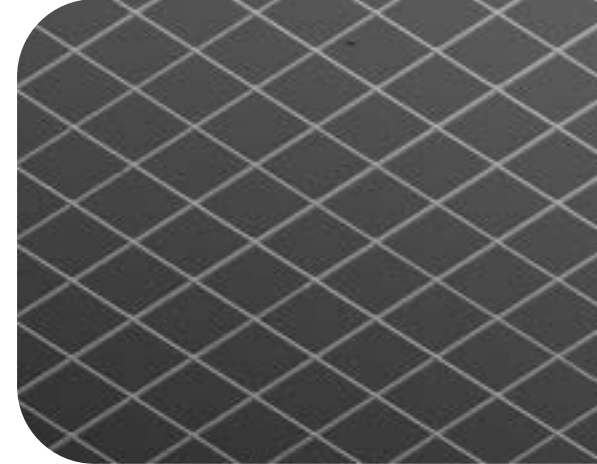
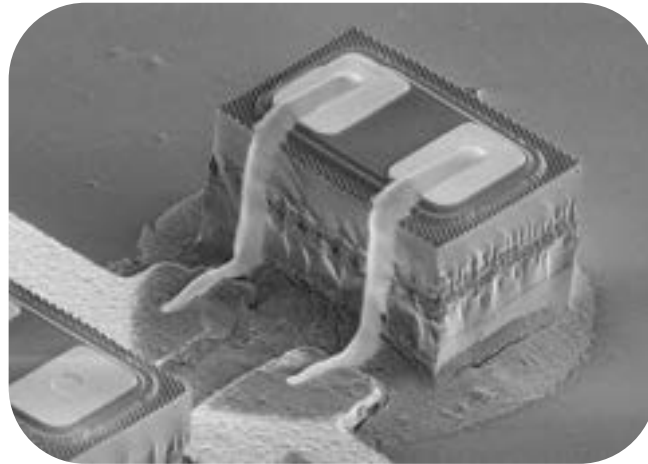
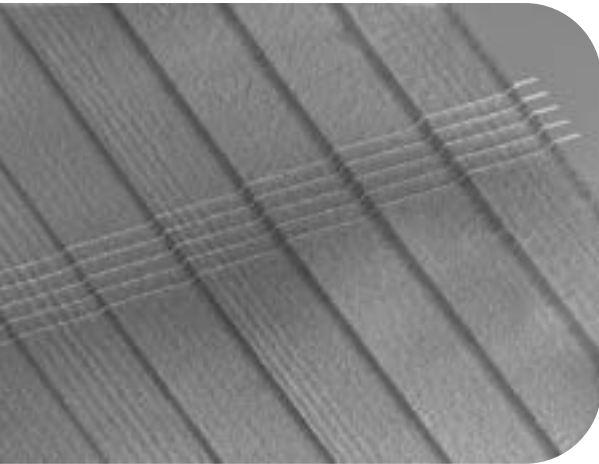
offer tailored end-to-end solutions that cater to our clients' unique needs

shape a future where technology empowers individuals worldwide

02

Technology and products

Game changer: Ultra-Precise Dispensing



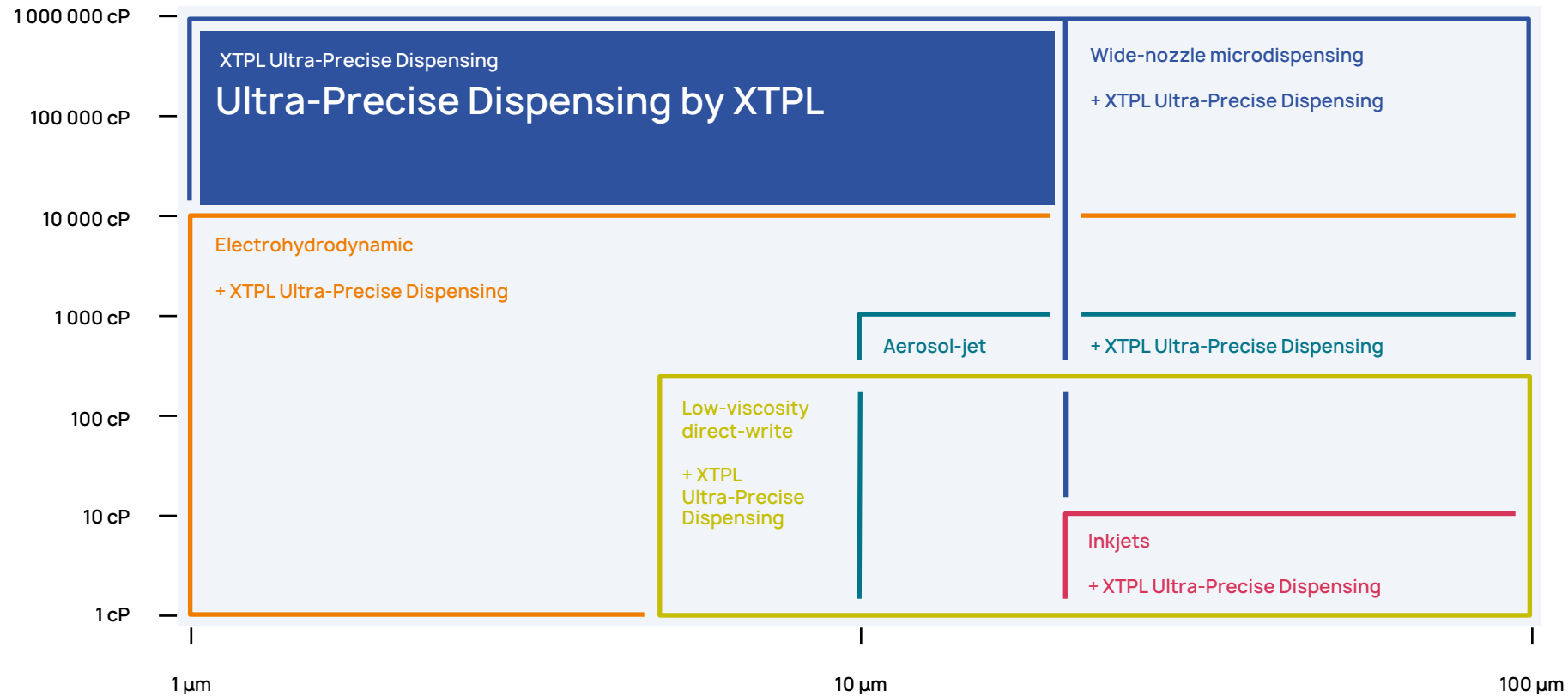
UPD technology sets a new standard in terms of resolution, viscosity and size of conductive structures

- Dispensing down to 1 μm feature size
- High resolution
- Material viscosity range 10–1 000 000 cP

XTPL Powering the microelectronics of tomorrow

- No overspray = no short circuit
- No electric field required
- Complex and various substrates: polyimides, glass, flexible foil, silicon wafers etc.

Game changer: Ultra-Precise Dispensing



- XTPL's general work area
- A unique area of XTPL no competing methods

Game changer: Ultra-Precise Dispensing



Sustainable technology

- Saving materials and energy during production processes
- Only 0.5ml of material to start the process
- Used material only in the cartridge and nozzle
- Reducing the amount of waste using additive technology

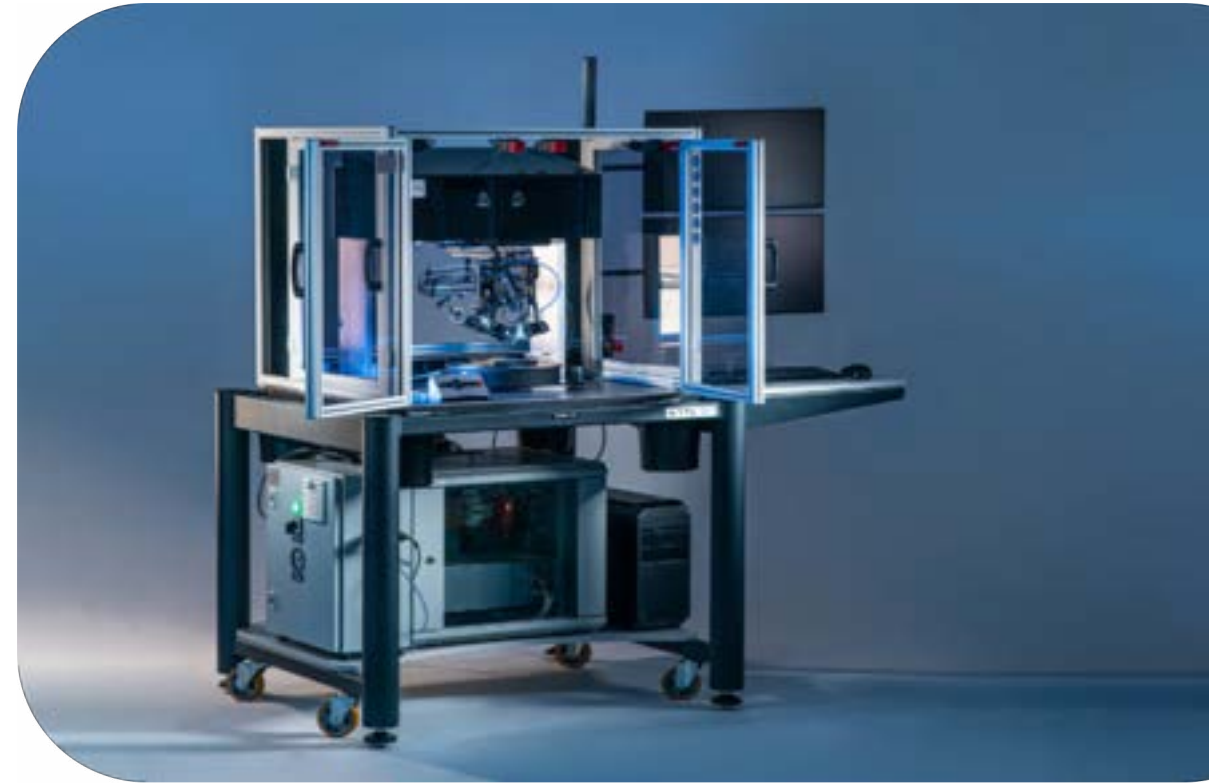


Delta Printing System (DPS)



Proven one-stop-shop in R&D
and commercial settings:

- Stand-alone, open platform
- Prototyping and small-volume/nest production
- Freedom of control over printhead
- Flexibility of User Interface: manual mode, CAD import, advanced scripting
- Fast and easy changeover of nozzles and cartridge



UPD System



Customized, integrated printing engine (HW, SW, peripherals and accessories)

- System for integration with running production lines
- Suitable for continuous/flow line production
- Small to high-volume production
- Compatible with DPS accessories and materials
- Easy changeover of cartridge and nozzles
- Single or multi-nozzle compatible



Tailor-made conductive nanomaterials

- Contract manufacturing based on in-depth knowledge and experience
- Materials expertise: synthesis, formulation, characterization
- Processing proficiency: sintering, end product characterization



Nanoinks and nanopastes

- Conductive nanoinks and nanopastes based on nanoparticles
- Make-to-order materials
- Silver product family for academics, and global industrial partners
- Gold conductive nanopaste
- Copper products under development



Customer care aftersales



The customer care aftersales team is crucial for ensuring satisfaction and trust through professional, efficient post-purchase support.

- System installation on the site
- Dedicated customer trainings with product manuals
- Software updates
- Consumables (nozzles and cartridges)



Products trusted by Industry Leaders



Tech giant from US
shaping our
everyday life

A semiconductor
leader powering
devices worldwide

Top display
& semiconductor
equipment
manufacturer



Automotive industry
leader with global
influence

BOE

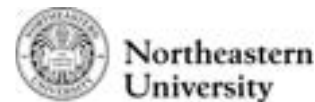
A distinguished
bioelectronics
Expert



Multinational tech
innovator in wearables



Emerging
Solar cell
Tech company



Your
Company

03

Key applications examples

Drive your ideas forward with UPD



- Consumer electronics
- Automotive/aerospace
- HealthTech
- Academia/RTO



Key applications - examples



Industry	Product	Subsystem/ component	Featured applications
Consumer electronics	<ul style="list-style-type: none">• VR Goggles• Wearable devices• Smartphones/ smartwatches• Entertainment systems	<ul style="list-style-type: none">• Displays/flexible displays• Semiconductors• Flexible circuits• Advanced PCBs	<ul style="list-style-type: none">• 3D IC packaging connections• Microdots/Quantum dots dispensing• Open defect repairs• Advanced topographies printing/over the edge• Microcavities and via filling
Healthtech	<ul style="list-style-type: none">• Medical electronic devices• Drug delivery systems• Active implants	<ul style="list-style-type: none">• Biofunctional electrodes• Wearable monitors• Biodegradable systems• Biosensors	<ul style="list-style-type: none">• All the above +• Biofunctional surfaces• Coatings• Encapsulations
Automotive /Aerospace	<ul style="list-style-type: none">• Headup displays• Microsensors• Crash detection systems• Light detection and ranging (LiDAR)	<ul style="list-style-type: none">• Displays/flexible displays• Semiconductors• Embeded systems• MEMS	<ul style="list-style-type: none">• 3D IC packaging connections• Microdots/Quantum dots dispensing• Open defect repairs• Advanced topographies / over the edge• Microcavities and via filling
Academia /RTO	<ul style="list-style-type: none">• Research&Development modules• Experimental devices• Prototypes• Customized devices	<ul style="list-style-type: none">• Emerging technologies solutions• Advanced materials structures• Further miniaturized architectures	<ul style="list-style-type: none">• All the above +

Consumer electronics - example



Smart
wristband



Flexible
display



UPD
Technology

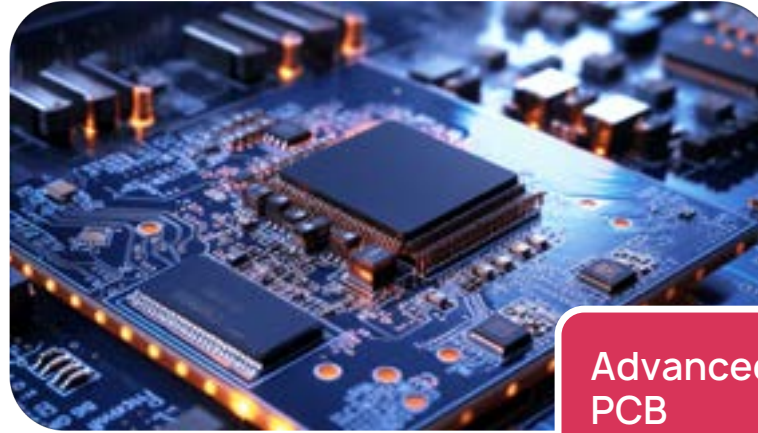


SEM Image

Consumer electronics - example



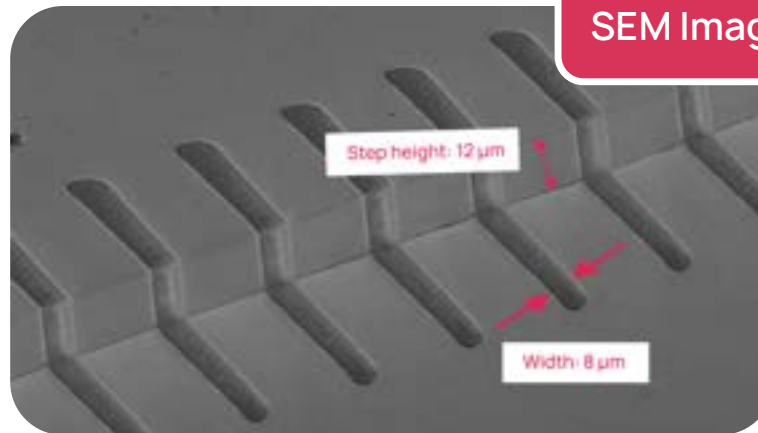
VR Goggles



Advanced
PCB



UPD
Technology



SEM Image

Automotive - example



Headup
display



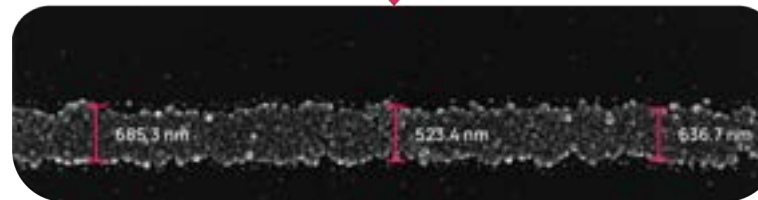
Display



UPD
Technology



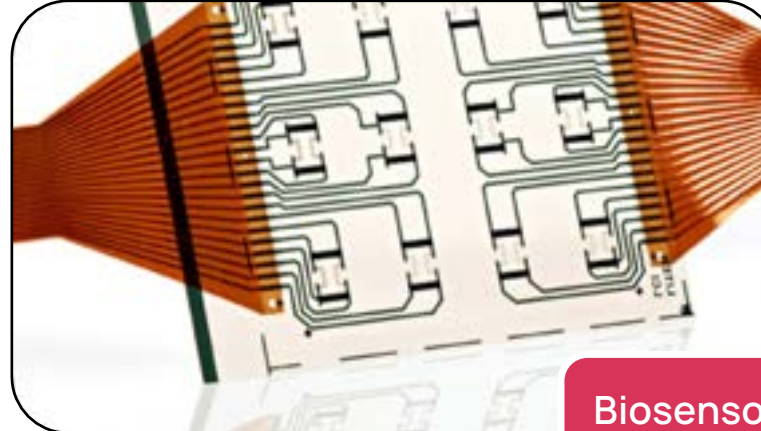
SEM Image



HealthTech- example



Active
implants



Biosensor



UPD
Technology



SEM Image



Thank you for
your attention

