



Printed E-paper Displays

Innovation and Applications Revolutionizing Display Technology

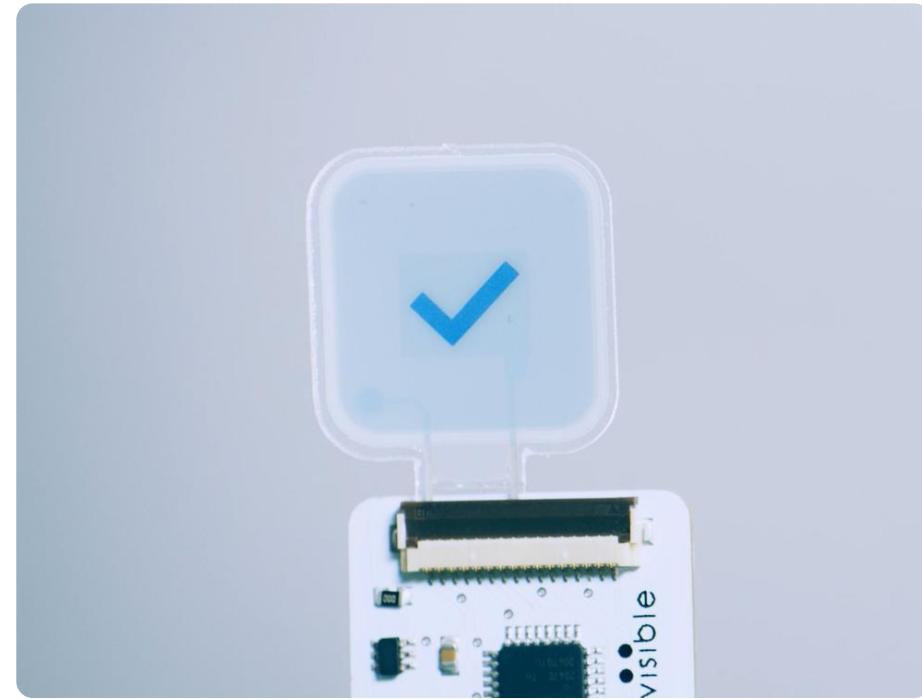


Printed e-paper displays

Printed Electronics Technology

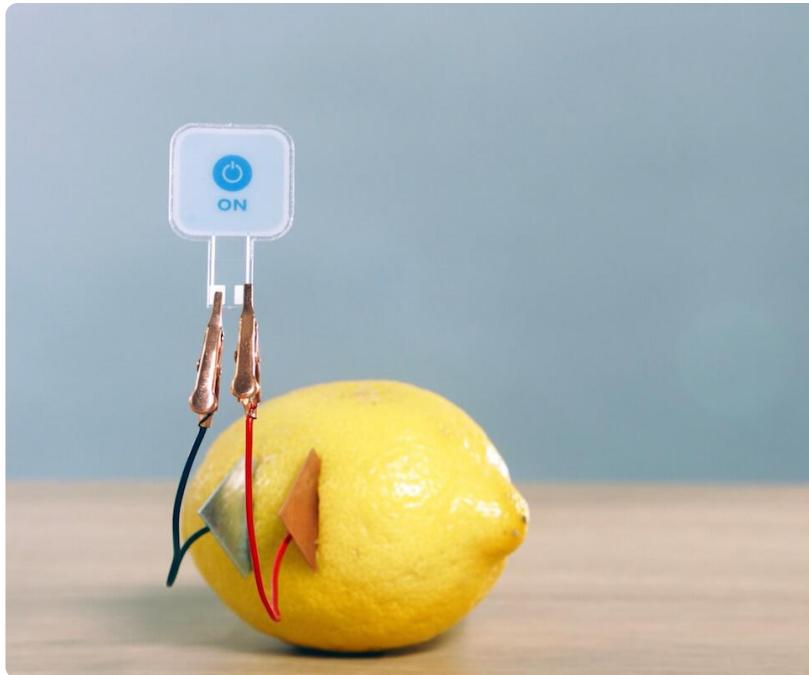
We produce **ultra-low-power printed e-paper displays** tailored to your needs.

Experts in printed electronics and manufacturers of customized displays based on **innovative electrochromic technology**.



Printed e-paper displays

Low-Power Technology



Most energy-efficient printed displays on the market

Ideal display for battery-driven or battery-less IoT devices.



Low-Power
 $< 1 \mu\text{W}/\text{cm}^2$

Ideal for battery-driven or battery-less IoT devices.
It's the nanowatt era.



Bistable
Image Memory

Doesn't require constant power to keep the display on.



Low Voltage
1.5V – 3V

Operated at lower voltages. Ideal for power sensitive applications.

Printed e-paper displays

Thin & Flexible Technology

Thin & flexible with endless design freedom

Experiment with different shapes, forms, and colors.



Thin
 $< 300 \mu\text{m}$

Micron thin displays fit for a wide range of wearables and other products.



Flexible
10 mm radius

Highly flexible displays fit for a wide range of applications.



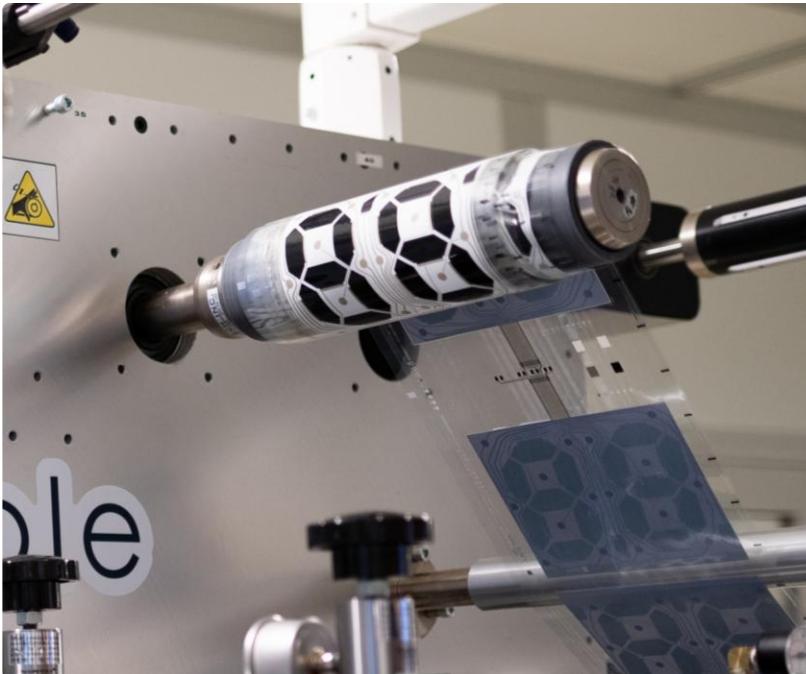
Customizable
Colours & shapes

Letters, symbols, numbers, and graphic elements are all possible.



Printed e-paper displays

Cost-effective Technology



Cost-effective production and integration

Use Ynvisible's e-paper to reduce system and component cost



Cost Savings Competitive Pricing

Roll-to-roll screen-printing means ultra-low-cost mass production.



Easy to Drive No extra Components

Direct drive from the IC to each display contact/segment.



Easy to Integrate ZIF, ACF or Glue

Versatile technology that provides different possibilities for assembly.

Printed e-paper displays

Sustainable Technology

Eco-friendly & sustainable e-paper display solution

Additive manufacturing process with low carbon footprint.



Less E-Waste Low metal usage

Low metal consumption
compared to other
display technologies.



Non-Toxic No toxic materials

No toxic and rare earth
materials used in
manufacturing..



Sustainable Unlike static paper

E-paper suitable for
multiple times usage
applications.



Printed e-paper displays

Ynvisible Technology



The most **cost effective**, **energy efficient** and **customizable** electronic displays!

ynvisible

Innovative Technology

From Idea to Mass Production



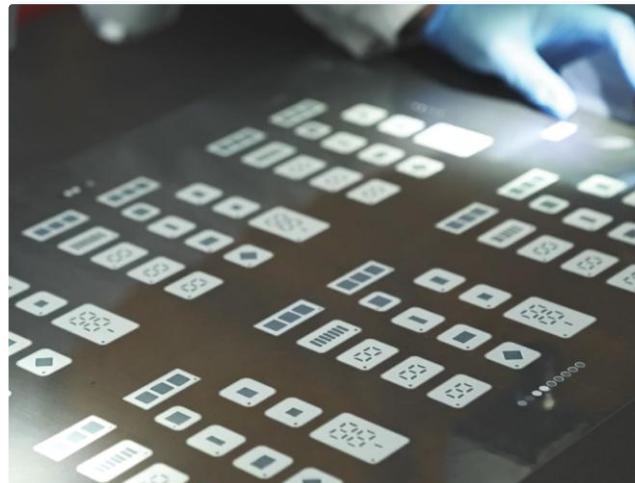
Manufacturing Process

From idea to mass production



Prototyping Sample Production

Rapid and cost-effective prototype production with your customized display design



Sheet to Sheet Low Volume Manufacturing

Production suitable for low volumes and pilot runs for verification and validation.



Roll to Roll High Volume Manufacturing

Mass production of printed displays and contract manufacturing services

Sheet to Sheet Production

Rapid and Cost-effective Displays with Your Design



Prototyping

From sketch to delivery in a few weeks with your specific display design.



Fixed fee of
3.500 EUR for
customized display
prototypes



Low Volume

Suitable to produce low volumes between 1000 and 5000 units.



Design Support

We help you throughout the entire design process



Volume Production

Displays Mass Production & Printed Electronics Manufacturing Services



Printing

Versatile printing and coating equipment.



Cost effective production for **customized display solutions**



Conversion

Slitting, cutting and lamination capacities.



Quality Assurance

Automated production with electrical and optical testing.



ynvisible

Industry Applications

Key Case Studies

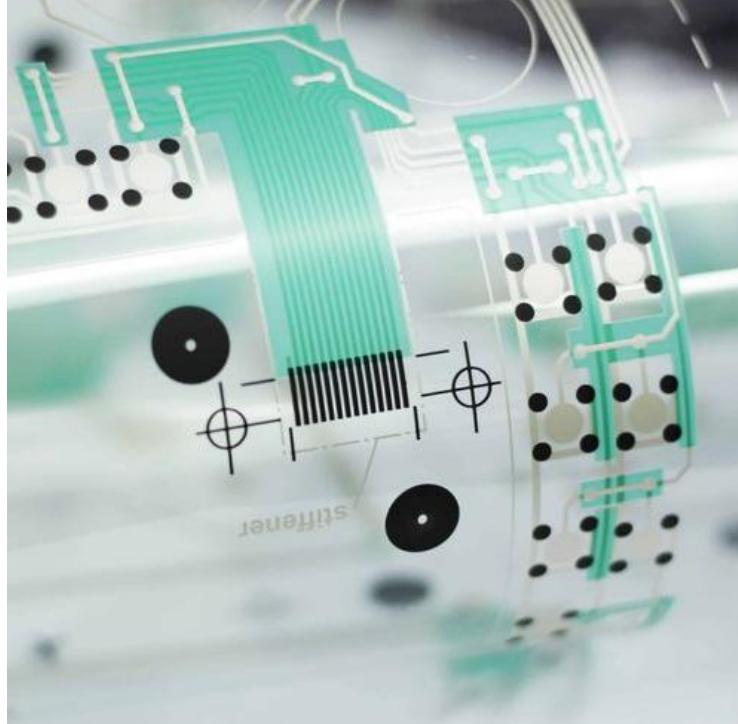


Market Drivers for E-Paper

Market Insight and Opportunities Identification



Sustainability
Bringing positive change



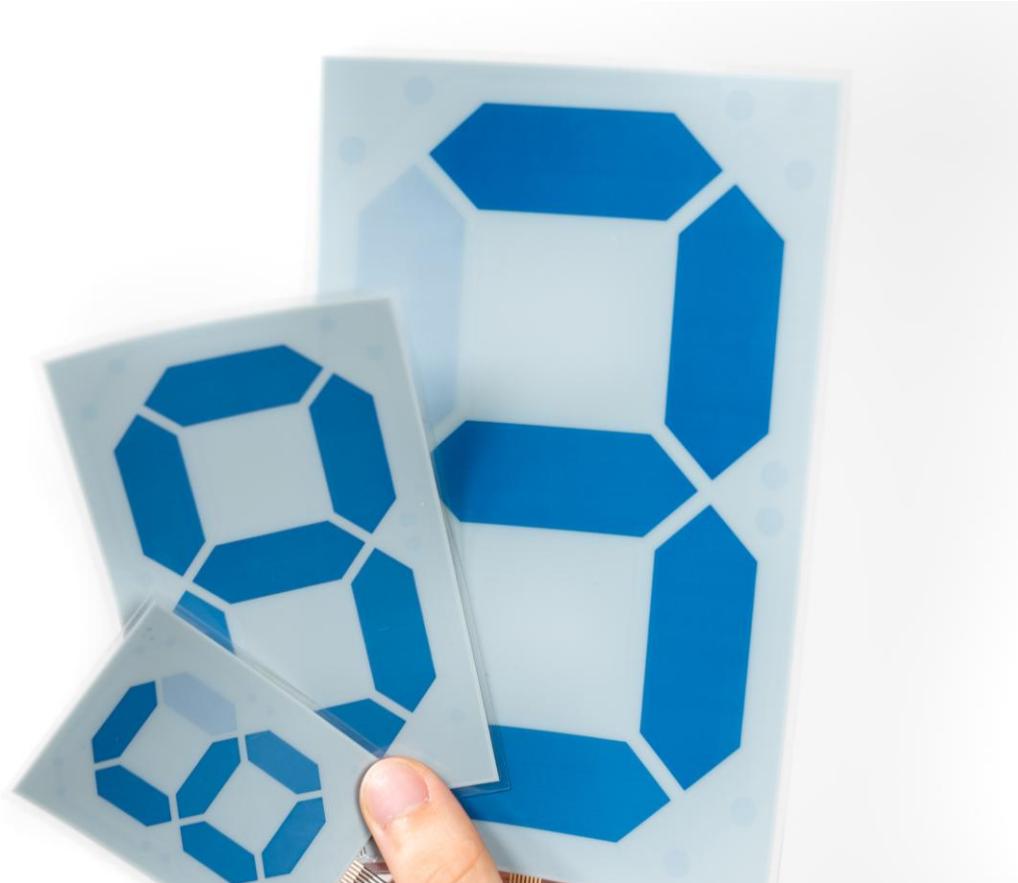
Printed Electronics
Breaking the cost model



Digitization
Bridging the digital and physical worlds

Printed E-paper vs LCD

The Most Sustainable Display Technology



Ynvisible E-paper Displays are the **Most Sustainable Display Option**

-200X CO_2

Carbon Footprint

* Preliminary Findings

Segment Markets for E-Paper

Target Market Segments

Retail



Healthcare



Industrial



Supply Chain & Logistics



Markets that we **currently serve** with **custom display solutions!**



Battery Powered Digital Signs

Dynamic Daily Prices



Home Medical Test Indicators

Visual feedback of test results



Indicators for Hygiene Solutions

Intuitive feedback on battery life and sanitizer readiness and use



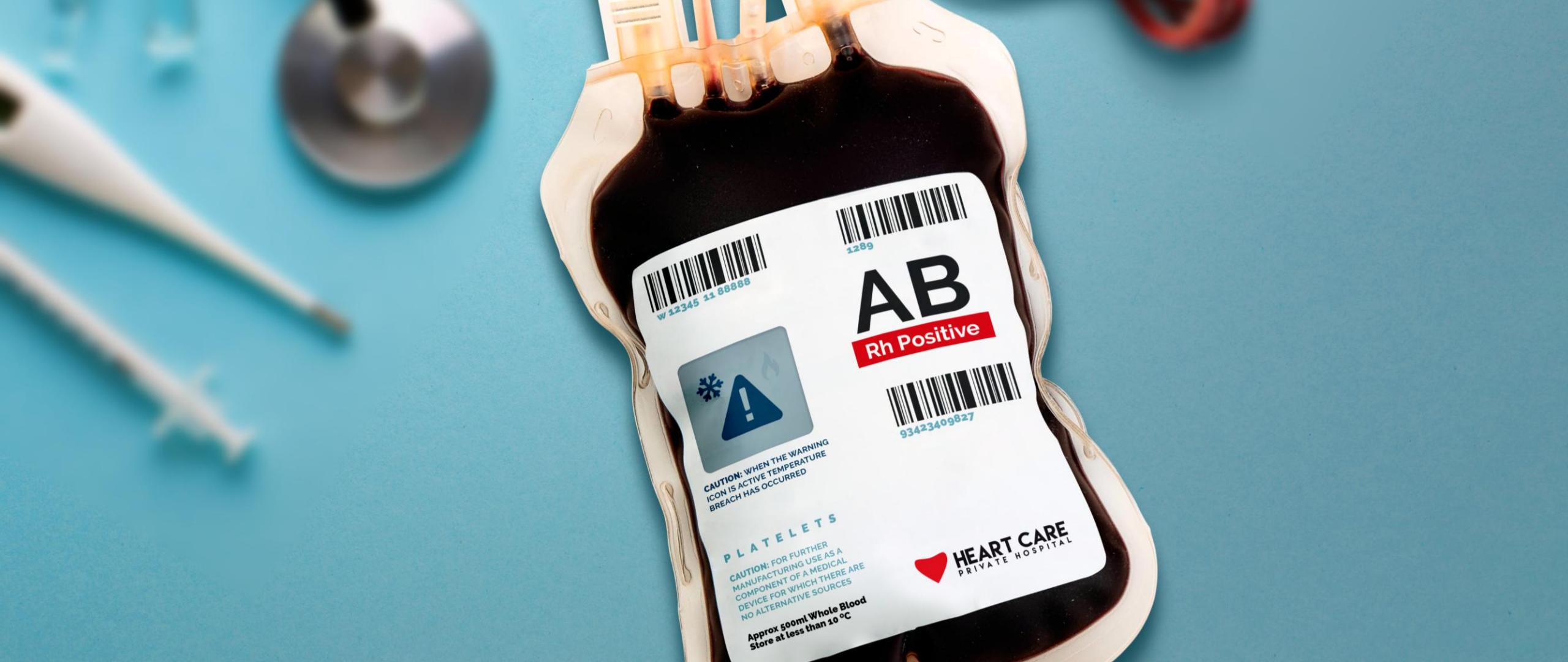
Industrial Maintenance Indicators

Visual indication of equipment's maintenance needs and timings



Smart Labels

Dynamic expiration dates for clinical trials



Smart Labels

Visual feedback for temperature alarms and product status

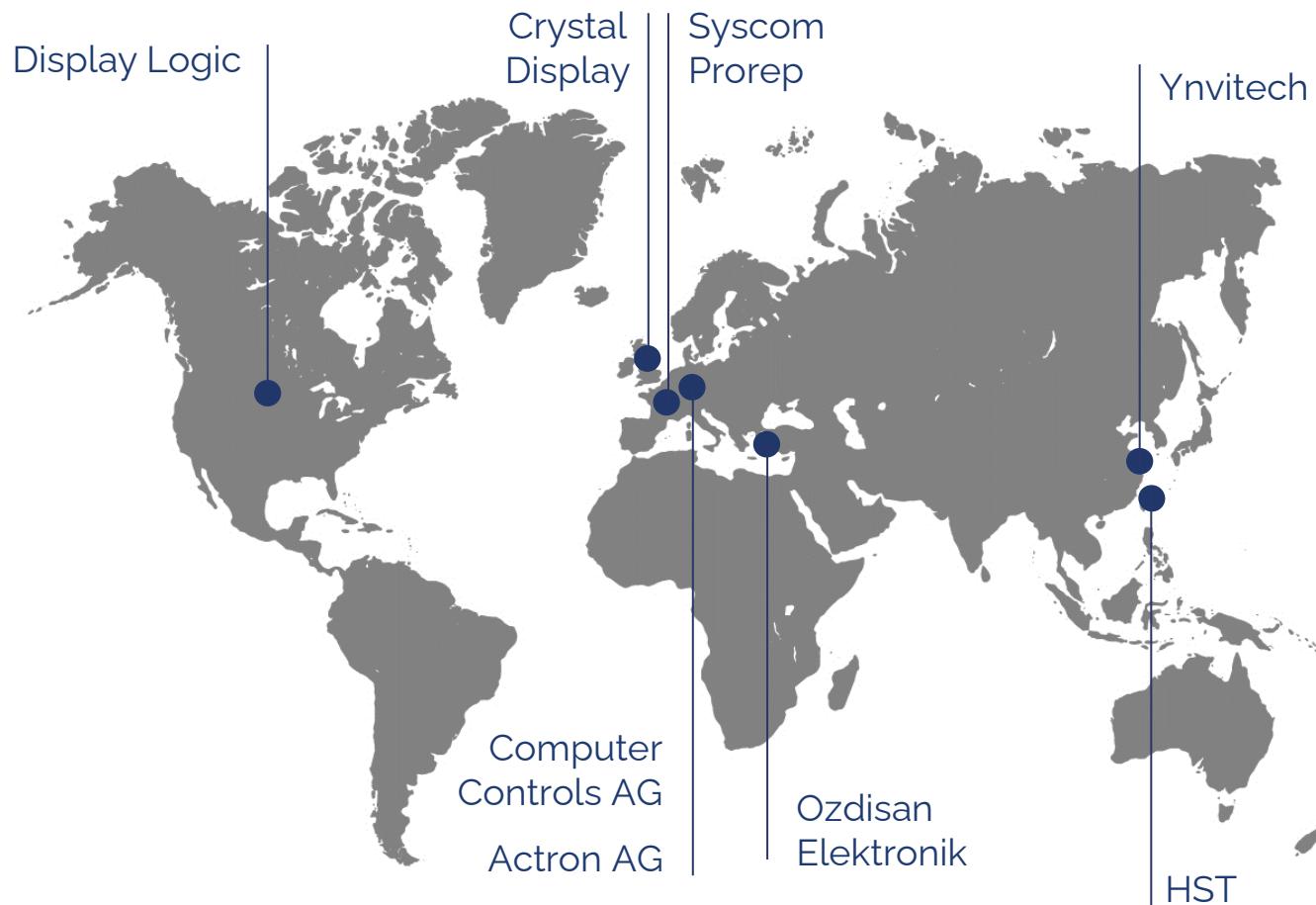


Pharma Supply Chain Labels

Visual feedback for temperature alarms and product status

Ynvisible

Distribution Network and Market Reach



We **commercialize printed e-paper products** using a global distribution network!

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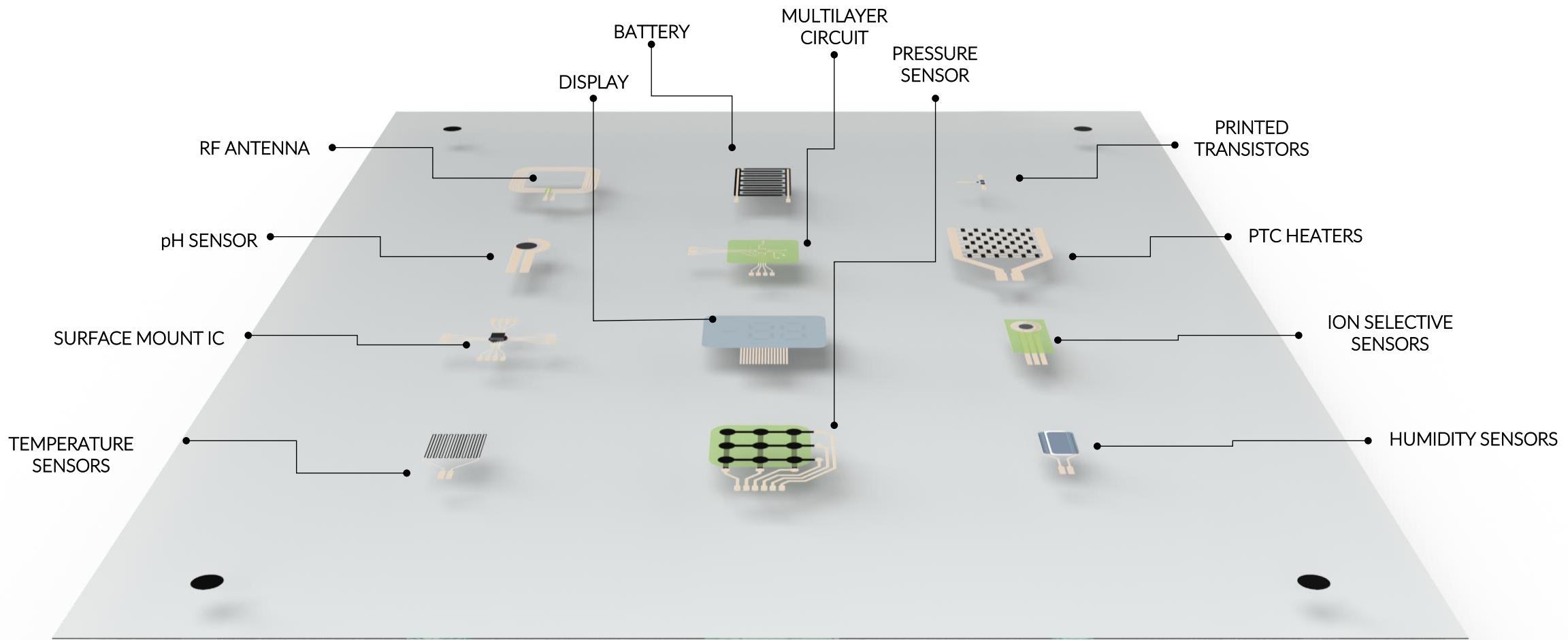
Future Trends

Next Generation Applications



Printed Electronics Modularity

Sensing, Communicating, Powering, Computing





Retail Price Tags

Self powered price tags for apparel



Intelligent Wearable Patches

Visual feedback for wound care management

Thank You!

Ynvisible

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