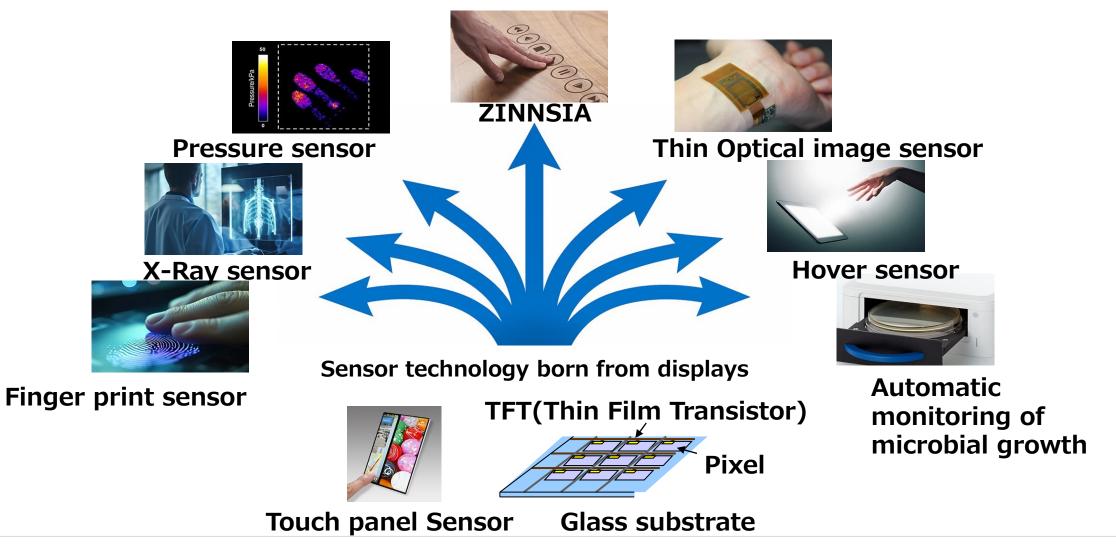
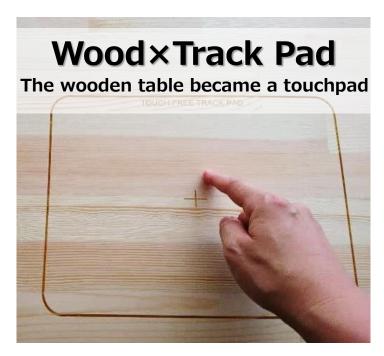
#### The strengths of JDI sensors

Utilizing high-definition manufacturing technology honed over the years in displays, we have achieved sensors with precision and sensitivity



#### What is ZINNSIA?

# A module that turns materials into touch sensors simply by sticking it from the back







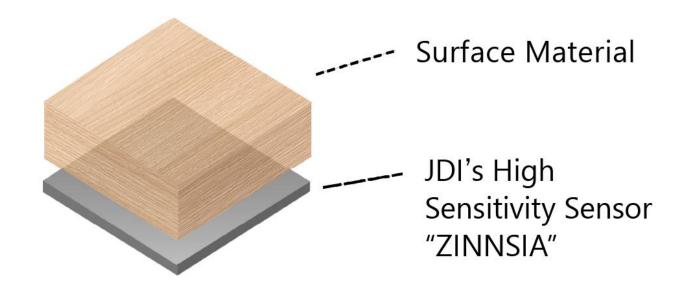
#### This way, wood and stone quickly transform into input devices!

#### **Compatible materials**

Various insulators such as wood, marble, gypsum board, ABS resin, PP, urethane, and leather.

#### What is ZINNSIA?

By adopting the same technology as smartphone touch panels, a highly sensitive touch panel technology can be implemented to achieve responsiveness even through surfaces like boards or walls



# Just stick it on the back side of the material - that's all you need to do!

#### What is ZINNSIA?

#### High sensitivity that responds even through 10cm thick wood

Excluding materials that conduct electricity such as metal.

#### Everything is a switch



#### Insulators are generally acceptable. For wood:

- Touch detection possible up to a thickness of 100mm
- Position detection possible up to a thickness of 50mm

#### The value that ZINNSIA brings

### Surprise (Product Impact)

Turning every material into a switch? Providing users with surprises.

#### **Innovative Design**

Achieving minimal and flexible product designs through hidden operational functions.

#### **User-Friendly Interface**

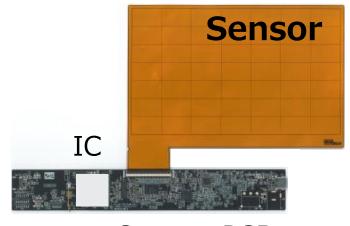
Intuitive touch controls that are easy for anyone to use, from children to the elderly.

#### Features of ZINNSIA

#### **ZINNSIA** runs smoothly even over materials

We achieve optimization through full-stack development (sensor design + dedicated IC + driving method + algorithm)

By developing everything in-house from hardware to software, we are able to deliver quick and precise responses even through materials, providing a comprehensive capability



System PCB

#### Other features

- **✓** High noise resistance characteristics
- ✓ Flexibility of sensor substrate (can be bent).
- ✓ Variety of product sizes available.
- **✓** Firmware adjustments tailored to each product

Stable operation without malfunctions even in noisy environments (providing peace of mind for installations in factories or outdoors).

Can accommodate various shapes such as thin and curved surfaces (applicable to curved devices and wearables).

You can choose the applicable size from small gadgets to large equipment.

It is possible to make optimal adjustments for each application and flexibly adapt to the requirements of the installation location. High noise resistance characteristics

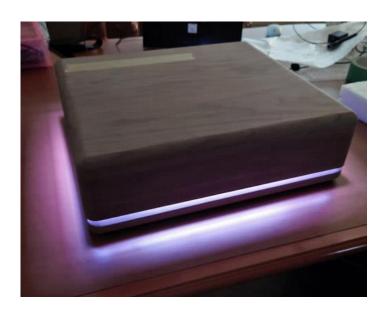
#### Use case

#### gadget·interior home appliance market

# 音楽1

A wooden speaker" is a device that combines the functionality of a speaker with the aesthetics of wood, providing a surprise element where sound is produced when touched, blending seamlessly into interior design while offering a unique user experience (UX) through the integration of design and functionality

#### housing and furniture market



"A desk light" is a luxurious lighting fixture that highlights the thickness of solid wood, allowing for operation through surface touch controls while maintaining a visually appealing design that seamlessly combines functionality and aesthetics.



An "adjustable lighting control interior light" is a lighting fixture that allows intuitive control of light through sensors embedded in marble, enabling interaction with stone materials that was previously challenging to achieve.

#### Use case

# **Education·ICT Educational toys**



An "illustration interface" is a design that allows the artwork itself to be interactive, enabling children to intuitively interact with it. It combines playfulness and educational effectiveness, serving as both a tool for learning and entertainment.

Housing and sanitation market



A "lighting switch" that offers flexible design options, allowing integration with wallpaper and interior design to maintain aesthetics while enabling easy operation.



"floor sensor" is a device that can detect human movement without any obtrusive equipment, as the sensor can be hidden under the floor. This technology has versatile applications, including monitoring the elderly for safety and security purposes.

#### Use case

#### **Game** · Amusement



A "balance board" that detects subtle cushion deformations and finely tracks foot movements in games, enabling more intuitive game controls.

#### **Toy and Robotics Market**



A "stuffed animal robot" that can identify touches on various parts of its body, allowing for diverse interactions with the robot (such as petting its head or hugging it) and changing its responses accordingly.

#### **Product information**

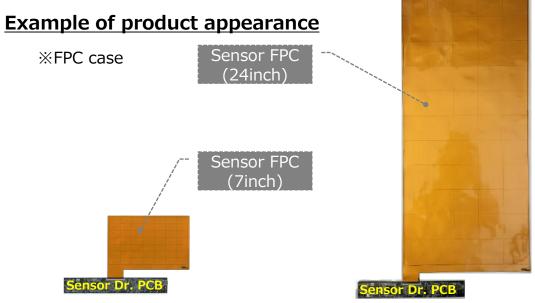
#### ✓ Please feel free to contact us when requesting samples.

#### **Specifications**

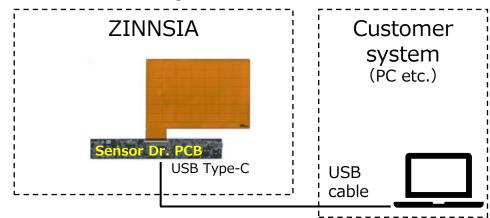
Product	ZINNSIA	
Operating principle	Capacitive sensing method	
Product structure	Sensor + drive board	
Sensor substrate	FPC(Bendable)/Rigid substrate/Glass	
Maximum sensor area size	~220x600mm(FPC) ~1000x550(Rigid substrate)	
Sensor thickness	0.2mm(FPC), 1.6mm(PCB)	
Sensor drive firmware	JDI original	
Interface	USB (HID/CDC) %I2C/SPI	
OS	Windows10 or later	

Detection axis		X, Y axis Height Z axis (Variable by switch.)	
Detection distance	Finger	≦ 5cm **Depend on sensor size	Detection possible even when wearing gloves.
Detection accuracy	Height Z 5cm position	±20mm ***Depend on sensor size	
Number of detection points.		1point (*Multi-touch is also possible)	
Detection speed		Report rate 120Hz (8.3ms)	

<sup>\*</sup>Please inquire for detailed specifications.



#### **Connection example**



#### Sample/Price

- We can provide small quantities of samples for prototype consideration, so please feel free to contact us
  - Question link
- We are happy to discuss individual project consultations.
   The next steps for product introduction (after inquiry):
  - Inquiry
  - Individual meeting held
- Prices vary depending on specifications and quantity, so we will provide a personalized quote through our sales team.

#### **Disclaimer**

- This document is a reference technical document managed by our company. Please read the following points of note and kindly use this document after acknowledging and agreeing to them.
- This document has been created as a reference information regarding the characteristics of our company's products. Our company does not provide any guarantees based on this document.
- The information contained in this document represents typical operations and applications of the products. While
  we take care to ensure the accuracy of the information provided, we do not guarantee the completeness,
  accuracy, or usefulness of the information.
- Please note that our company may change the content of this document without prior notice. Reproduction, duplication, or any form of reprinting of all or part of this document, with or without modifications, without obtaining prior written consent from our company is prohibited.



# Changing the concept of switches to provide new value, experiences, and joy

The new user experience created by ZINNSIA