

Reinventing Accessibility,  
**Dot by Dot**



- Braille
- Haptic
- Sensor
- ICT
- IoT
- Mobile
- Cloud Platform
- Big Data
- AI

• dot ::

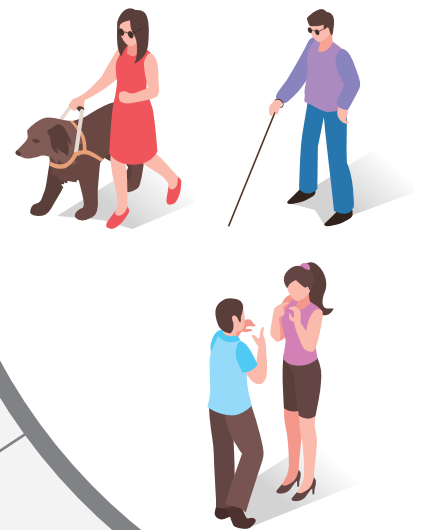
Reinventing Accessibility,  
**Dot by Dot**

*Since 2015, Dot has reinvented accessibility for the visually impaired with Braille assistive technology.*

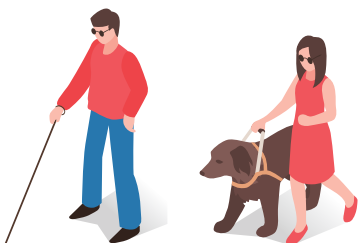
*From 2020 and beyond, Dot aims to expand this mission to include the transportation vulnerable and the mass public by leveraging our award-winning inventions and patented technologies.*

dot ::

20



2015~



**Braille Devices**

Dot Assistive Technology

For the Visually Impaired

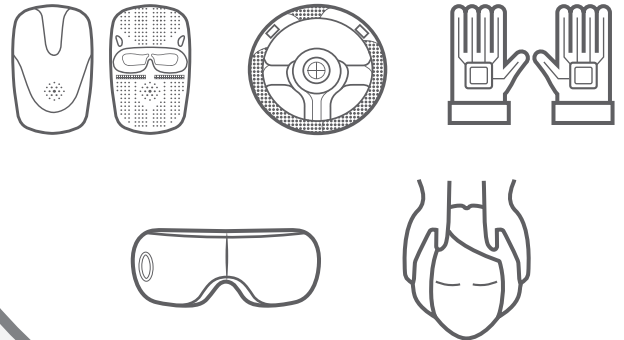


# Reinventing Dot Braille Actuator

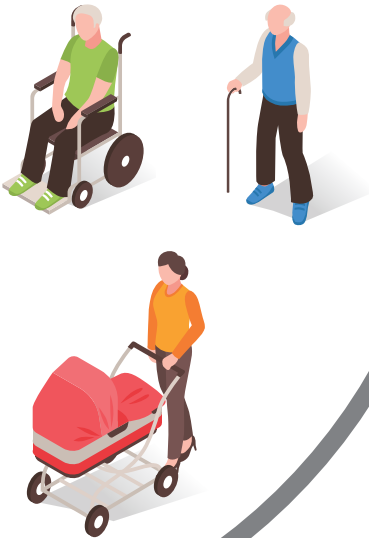
Dot Haptic

For all the People

# 2021~



# 19~



# Barrier-Free Smart City

Dot Accessible Infrastructure

For the Transportation Vulnerable



# Dot Assistive Technology



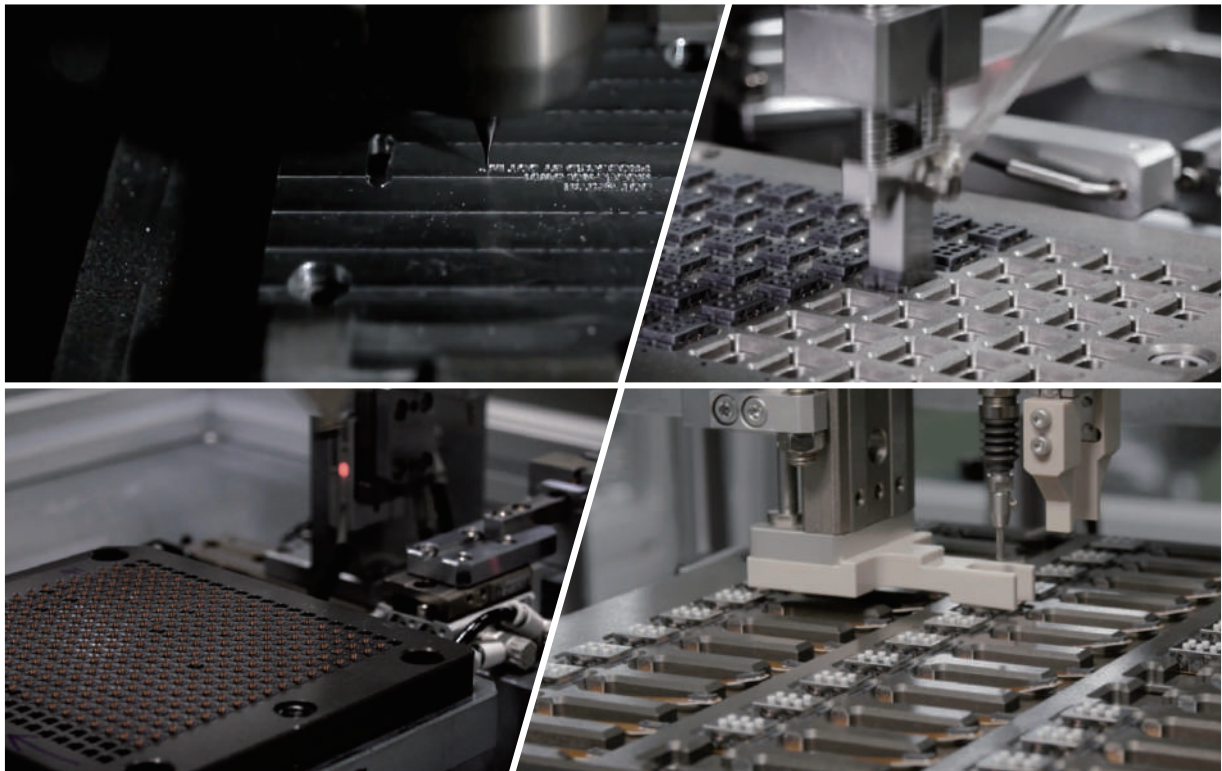
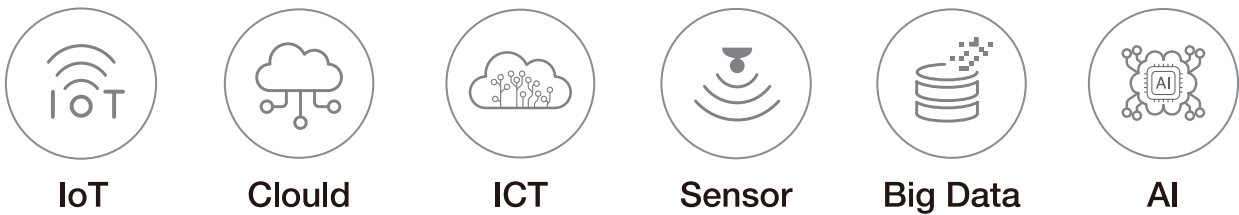
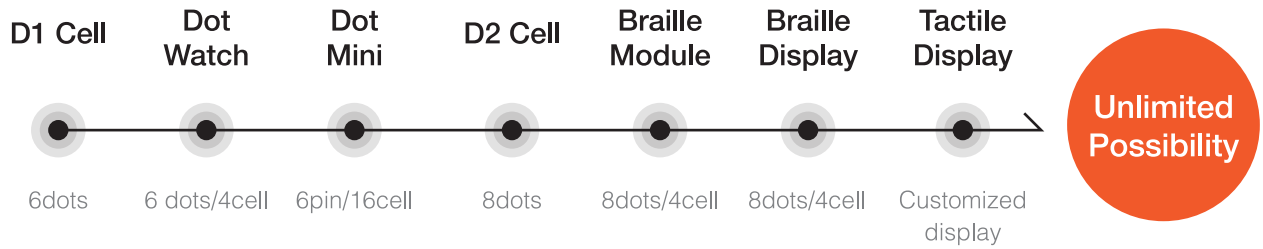
Dot has constantly challenged ourselves to create the most affordable and innovative solutions for the disabled. In this pursuit, Dot has created a variety of interactive devices so that information can be more easily accessible for the blind and visually impaired.

We won't stop innovating until the visually impaired and the deaf-blind are able to feel included and connected with our world.

**We dream of a more disability-friendly world with facilities that are easy to access.**

# Braille Technology Electromagnetic Actuator

We have focused on improving the life styles of the disabled by creating interactive and intimate digital devices, powered by Dot's Braille actuator.





# Braille Cell and its Devices

Dot has registered around 114 patents globally.  
Compared to existing technologies, the Dot Cell is much smaller and more cost-effective.



2017

2018

2019

2020

2021

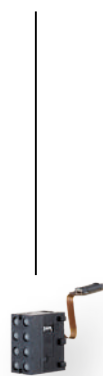
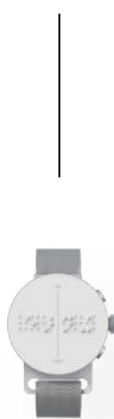
Dot Cell(D1)  
(6pin cell)

Dot Watch  
(Braille Smartwatch)

Dot Cell(D2)  
(8pin cell)

Dot pad  
(Tactile display)

Dot Kiosk - Dot Public  
(Barrier-free kiosk)



## Dot Haptic

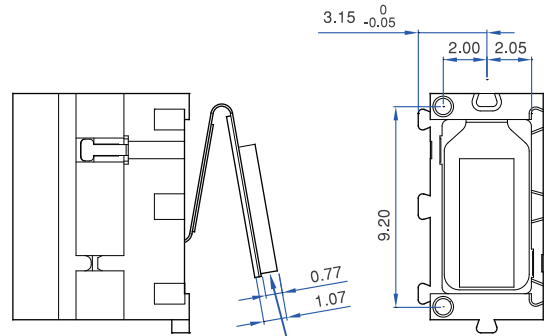
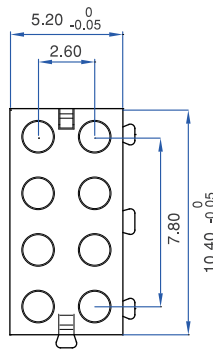
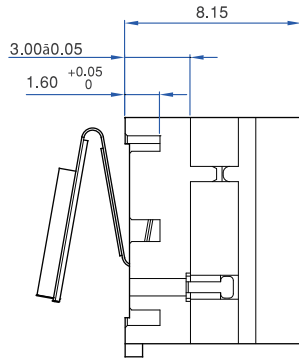
### Reinventing tactile technology

Dot aim to show a whole new level of tactile communication  
with groundbreaking technology and accumulated experience.

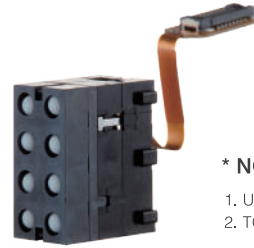
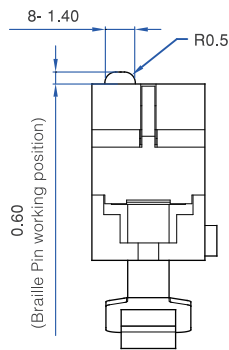
[Learn more](#)



# D2 Braille Cell



**Connector Socket**  
(Panasonic, AXE516127)



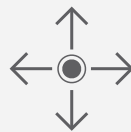
**\* NOTE**  
1. UNIT : mm  
2. TOLERANCE : 0.05

10.4 X 5.2 X 8.15mm

## Expandability



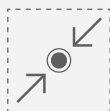
**Mass-producible**



**Scalable**



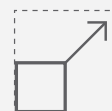
**More Affordable**



**Smallest**



**Lightest**



**More Versatile**

# Braille SmartWatch

**Elegance**  
Award-winning Design

**Long Battery Life**  
(Battery life varies depending on use and other factors)

**Managing Calls**  
Know who is calling

**Durability**  
Super light aluminum  
(Body : 27g / Band : 29g)

**Messaging**  
Instantly translated to Braille

**Smartphone**  
It seamlessly interoperates with your smartphone via Bluetooth.

## Key Features

Braille Smartwatch aims to help the visually impaired feel more connected. Dot watch also gives direct access to daily practical features such as date and time, alarm clock, stopwatch, and timer. It vibrates and displays who's calling or texting, as well as shows app notification. Also, any message is instantly transmitted and converted to Braille notation, and the messages can be read using the intuitive touch control.

## Specifications

<b>PLATFORM</b>	Wireless MCU platform
<b>BLUETOOTH</b>	Bluetooth LE (Low Energy) 4.2
<b>CPU</b>	32 bit ARM Cortex M4F
<b>BRAILLE DISPLAY</b>	4 Braille Cells (6 Dots)
<b>BUTTON</b>	2 x Buttons (Select & Home), 1 x Encoder Switch (Crown)
<b>BATTERY</b>	Non-removable Li-Polymer 380mAh
<b>DIMENSION</b>	Body 43.0 (Diameter) x 12.5 (Thickness) (mm) Band 22.0 x 210 (Small) / 250 (Large) (mm) Cradle of Charger 45.0 x 7.0 (mm)
<b>WEIGHT</b>	Body – 27g / Band – 29g
<b>MATERIAL</b>	Body (Aluminum Steel) / Band (Magnetic Mesh) / Cradle of Charger (Plastic)
<b>COLOR</b>	Front (Off-White) / Body (Silver) / Cradle of Charger (Gray)



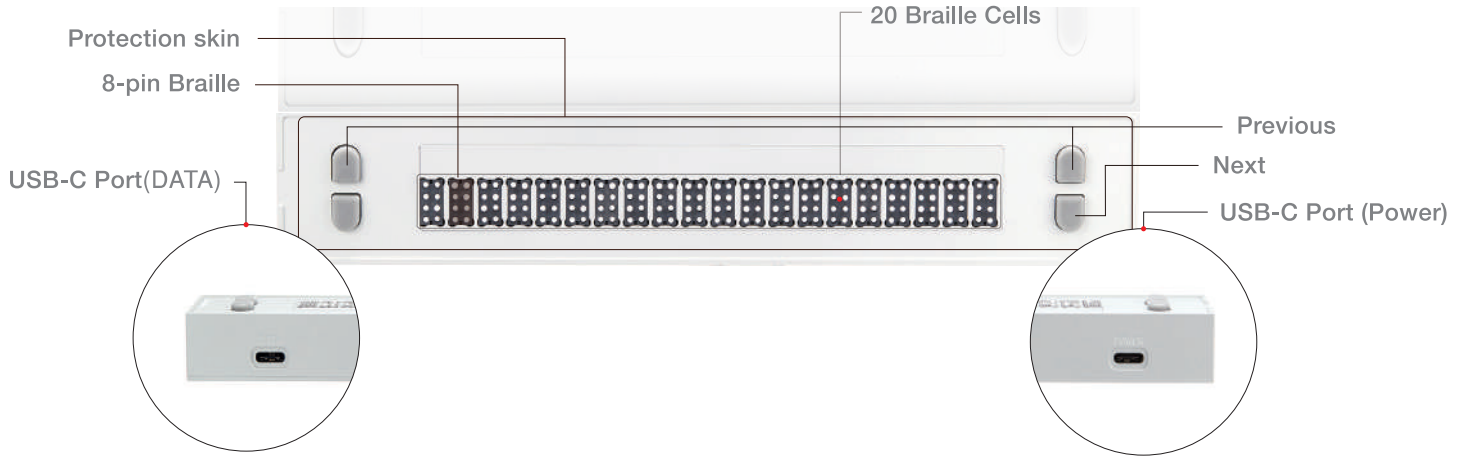
# Dot Watch

The first Braille smartwatch



# Dot Module 20

We can make any types of interactive accessible kiosks using the module for Braille users.



The descriptions, specifications and other claims made with respect to the products featured in this catalogue are subject to change without notice because of our continuous product development.

\* More specific information can be provided on Website and through email inquiry.

## Specifications

<b>Model Name</b>	KM2-20 A / B
<b>Product Description</b>	8-pin 20 Braille cells
<b>Dimension</b>	131.95 (133.32) x 19.5 x 14.45 (W x D x H, mm)
<b>Humidity</b>	Operating Humidity 10% to 95% Non-Condensing
<b>Supported OS</b>	WIN10, Linux (Optional), Android (Need to discuss)
<b>Customization</b>	Customizable according to the customer's needs.



Automatic Certificate Issuance Machine



Bank ATM



Ordering Kiosk



Ticket Kiosk



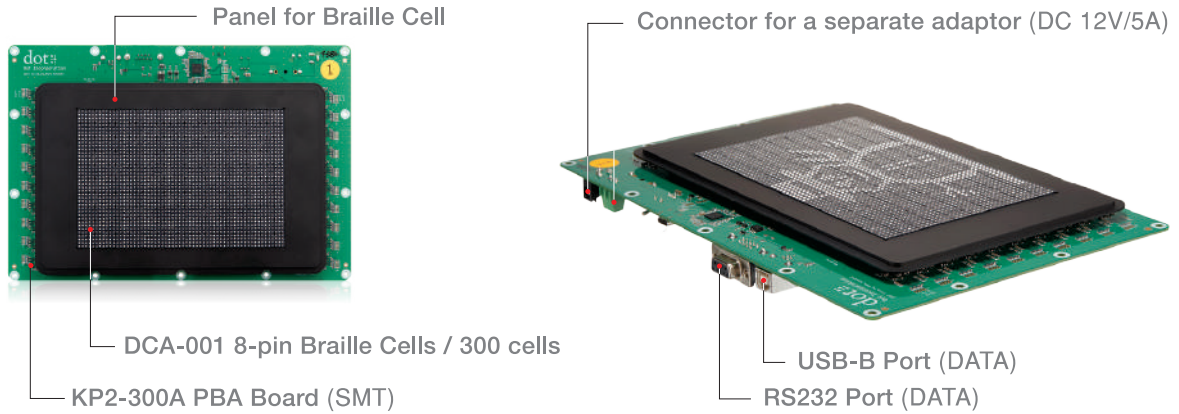
Digital Signage



Information Kiosk

# Dot Module 300

Access any lengthy information such as e-mails and e-books, formulaic calculations, graphical representations, and data input.



The descriptions, specifications and other claims made with respect to the products featured in this catalogue are subject to change without notice because of our continuous product development.

\* More specific information can be provided on Website and through email inquiry.

## Specifications

<b>Model Name</b>	KP2-300A
<b>Dimension</b>	262 x 180 x 9.7 (23.7) (W x D x H, mm)
<b>Humidity</b>	Operating Humidity 10% to 95% Non-Condensing
<b>Supported OS</b>	WIN10, Linux (Optional), Android (TBD)
<b>Customization</b>	Customizable according to the customer's needs



Tactile Map and Information Kiosk



Kiosk for Exhibition Items



Desk for Study and Work



Application on Gaming Device



Digital Signage



Any Devices Needing Tactile Function

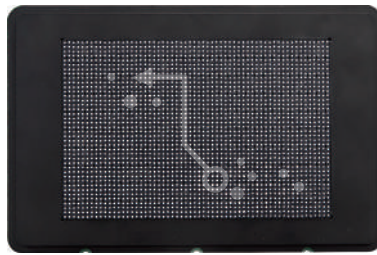
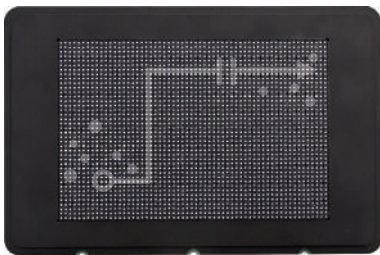
# Tactile Display

## -Application Examples-

Dot aims to have the strongest tactile technology by entering the haptic market. We are advancing the business with a concrete R&D roadmap on a phased basis.

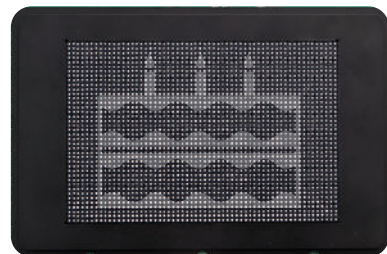
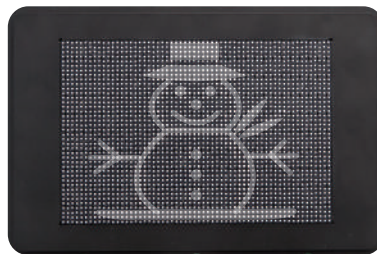
### Tactile Map

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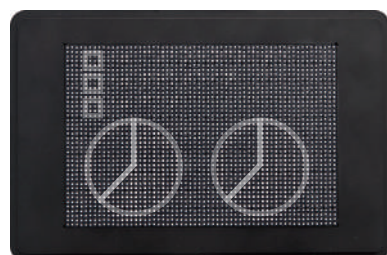
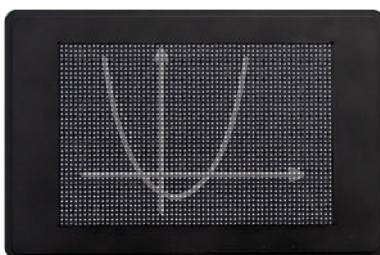
### Image

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### Mathematical Graph

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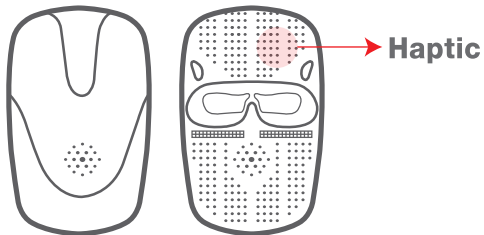




# Market Expansion using Braille and Haptic Technology

With Dot's core patent for its Braille Actuator, business expansion from the assistive devices to VR · AR · Haptic devices is possible.

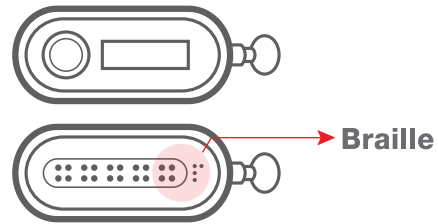
## Beauty Industry



### Face Massage Device

It can be used for beauty industry items such as a beauty mask that uses tactile cells to stimulate facial muscles.

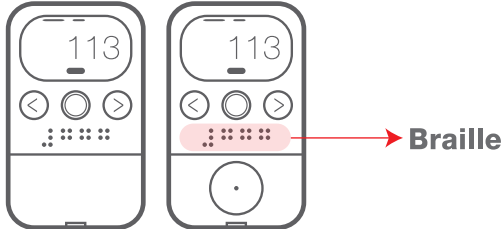
## Finance Industry



### Braille OTP

It can be used for finance related products such as OTP that displays one time password through Braille cells.

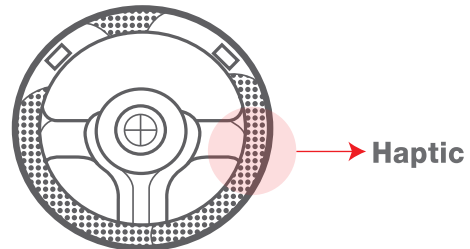
## Healthcare Industry



### Blood Glucose meter

It can be used for personal medical measurement equipment such as a blood glucose meter and blood pressure monitor by integrating braille cells.

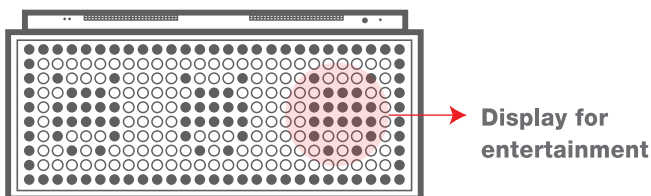
## Automotive Industry



### Tactile Function for Steering Wheel

It can be used to give car drivers a warning about drowsiness and lane departure through tactile cells integrated to the vehicle steering wheel.

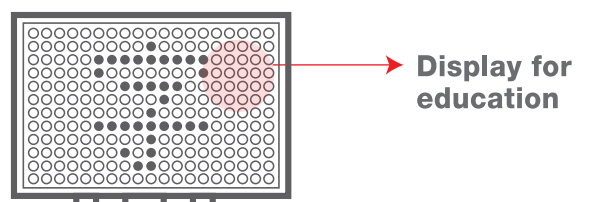
## Media Industry



### Physical Display

It can be used as a physical display using tactile cells for the outdoor advertising showing stereoscopic visual effects.

## Education Industry



### Graphic Display

It can be used as an educational aid to help the visually impaired understand letters, images and mathematical graphs.



# Dot Infra

## -Barrier-free Smart City-



## Touch the Connected World, Dot by Dot

The world has been undergoing rapid digital transformation through IoT, 5G, Big data, and AI technologies. However, ironically, such technological advances do not guarantee equal opportunities for all people. Rather, it is depriving people of the chance to access places and information. Dot's mission is to empower accessibility in this 4th industrial revolution and reinvent the tools for everyone who lives in cities.

In order to achieve this, Dot will be able to apply Braille (tactile) modules to various types of accessible facilities each and every smart city's needs. Also, collaborating with other assistive technologies, we can provide a total solution for physically challenged people all over the world. Ultimately, we aim to provide barrier-free facilities that enable people with disabilities to access all the information.

# R&D Services

Dot has a specialized Research & Development team dedicated to the barrier-free smart city project.

We provide in-depth consulting and customized R&D results for digital infrastructure and contactless solution.

## R&D Services that Dot Provides



Assistive Technology



Digital Infrastructure



Contactless Solution



Haptic Technology

## Hyper-connector for Barrier-free



Inquiry

Consulting & RFP

R&D Contract

Feasibility

Installation

Pilot & Mass Production

Engineering Prototype

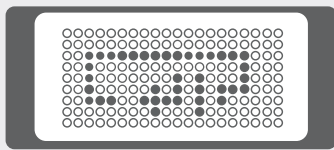
Design

# Accessible Kiosk for Wayfinding

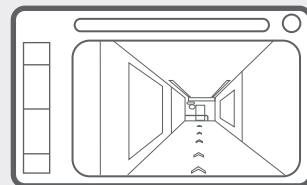
Provides directions that anyone can easily understand



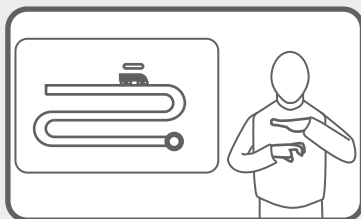
\* The height of the kiosk can be adjusted automatically by positioning display at eye level.



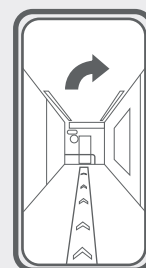
Digital tactile display



3D Navigation map



Sign language video



Both Braille and voice are supported, and you can interact with the kiosk through smartphone app (iOS and Andorid) to get real-time directions.

Indoor navigation

# Accessible Kiosk for Self-Order

Non-face-to-face self-order service that anyone can use



## Dot Module 20

It helps to deliver necessary information by letting the visually impaired use finger touch to recognize words on the self-service machine. It will be available to change the way the visually impaired interact with any kind of kiosks.

## Other components

1. Keypad
2. Speaker (Earphone jack)
3. Audio Guiding Device

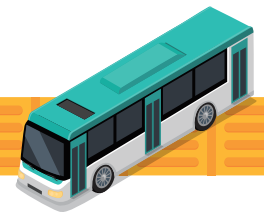
People with disabilities and the elderly can use the device with simple button operation without using the touch screen. All buttons have Braille notation and screen reading function (voice support) to help convey information.

# Accessible environment interlocking with Smart City Infrastructure



## 01 Accessible Bus Stop

The barrier-free smart bus stop which can provide real-time public transportation information with Braille, sign language, voice, and even the signage display.



## Subway Station Premises

### 02 Indoor Navigation

Provides indoor navigation service by using the smartphone application.



### 03 Barrier-free Kiosk

Route Guidance for the transportation vulnerable who is not carrying a smartphone.



### 04 3D Mapping Technology

Securing location accuracy and visibility through 3D modeling technology.



### 05 Data-based Optimal Guidance

Optimal route guidance according to facility status and their characteristics of each transportation vulnerable.

### 06 Guidance through Braille Block

Route Guidance through braille block for the visually impaired.



Route Guidance through stairs and escalators for people who prefer them.



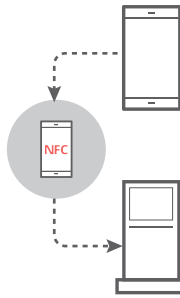
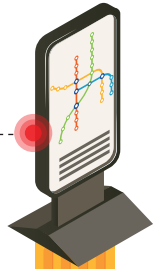
Route Guidance through ramps and elevators for people using a wheelchair and stroller companion.



# 📍 Tourist Attraction

## 07 Accessible Tourism Kiosk

The barrier-free tourism kiosk which can provide directions and tourist information to all people including the disabled, transportation vulnerable, and non-disabled as well.



1. App Download
2. Interlocking with the information searched
3. Continuous Tour Guidance

Braille / Sign Language / Voice / Automatic Height Adjustment



Route Guidance through Braille Block for the Visually Impaired (Providing Real-time information)



Route Guidance through Smartphone (Providing Real-time information)

## 08 Tourist Information

Providing detail information about the tourist attraction they visit.



"At the four crossroads of the principle, alleys stand four fountains, built in the 1670...."



## 09 Outdoor Navigation

[ Measurement ]  
GPS & Position Sensor



Wearable Device for the visually impaired



Visually Impaired  
Tactual Map & Voice



Non-Visually Impaired  
Smartphone Display & Voice

## 10 O2O Matching based on APP



O2O Matching with Customers nearby



• Restaurant/  
Food Truck

• Location Based  
O2O Application

AD/Coupon Issued

AD/Coupon Received

Order Accepted

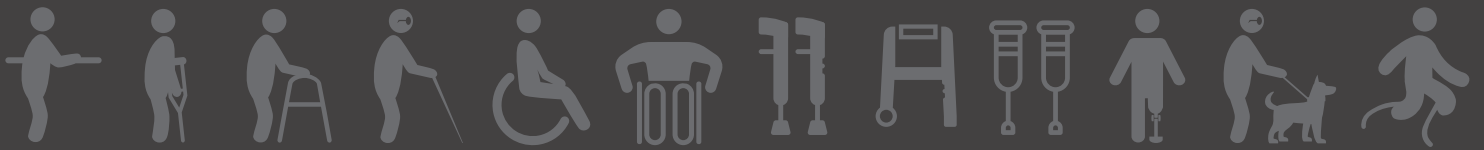
Order&Payment

Menu prepared

Arrival&Pick-up

Providing outdoor navigation service by using the smartphone GPS and position sensor.

Along with the app, potential customers can receive useful information based on their real-time location.



dot ::

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