

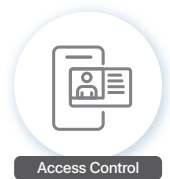
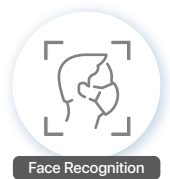
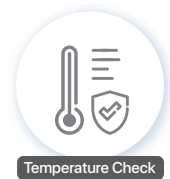


Hitachi-LG Data Storage, Inc.

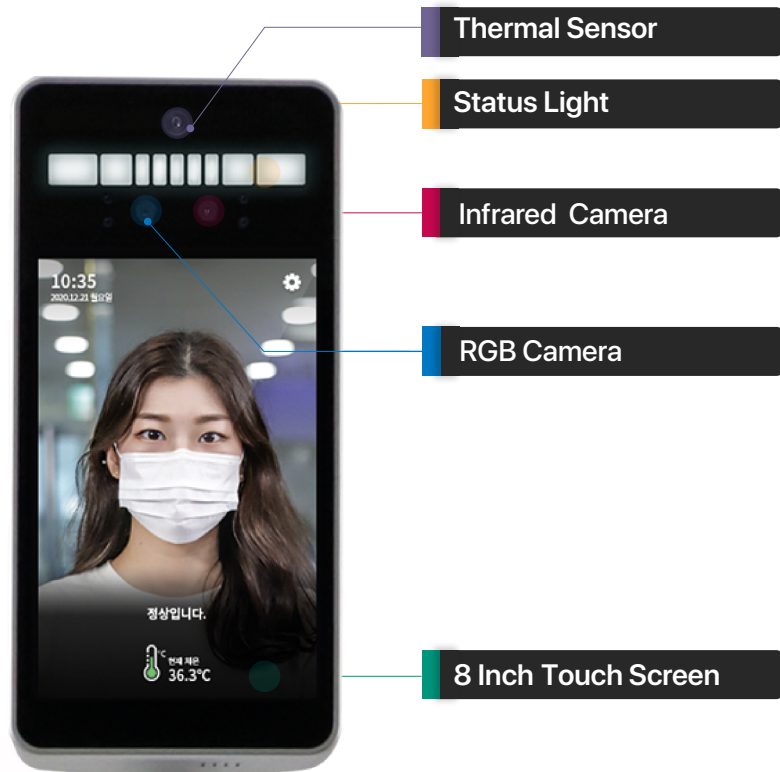
# SAFE PASS

Face Recognition  
Temperature Measurement Terminal

© 2020 Hitachi LG Data Storage, Inc. All Rights Reserved.



\* This product is not a medical device. Please use an authorized medical thermometer for the diagnosis of disease.



## Powerful Core Function



### Top Class Face Recognition AI Engine

: 99.5% accuracy in just 0.2 sec (NIST Approved)<sup>[01]</sup>



### HL365™ Temperature Monitoring AI

: ±0.2°C accuracy within ~1.0m distance<sup>[02]</sup>



### Face Mask Ready

: Face recognition and temperature scan with mask-on  
: Optional alert for mask-off face

## Industry Best Hardware



### Hexa-Core RK3399 Chip for Android

: Super fast Hexa-Core Max 1.8GHz with 30,000 face library



### 8 inch Touch LCD Display

: Supports 800x1200 resolution



### WiFi & Bluetooth Mobile Connectivity

: Easily connect to your system, cloud and more

## Next Step towards Evolution



### Value Extension Package

: Explore for new experience with our various IoT solutions  
"Safe Pass" + Large Format Touch Display + AI Voice Assistant + 3D LiDAR



### Integrate with Access Control System

: Link to your security gate control system and more

## Greater Peace of Mind



### Anti-Spoofing

: Deep learning + IR camera for liveness check



### Encrypted Data with "Made in Korea" S/W

: Proprietary encryption format with no back-doors

## Ease of Use



### Administrator Tool for both PC & Mobile

: Supports QR visitor register, SMS text alert<sup>[03]</sup>



### Online Software Update

: One touch download for new S/W updates



### Easy Installation

: Height extension (0.9~1.4M)  
: Plug & Play, no tools needed



### 3 Way Communication for Interaction

: LCD Display + LED + Voice  
Prompt for effective communication  
: Supports 5 languages (ENG/CHN/KOR/JPN/VTM)

[01] Under no-mask condition

[02] Around 25°C, indoors, no-wind condition

[03] SMS alert only available in Korea

## Various User Scenarios



✔ Restaurant



✔ Office



✔ Café



✔ Convenience Store



✔ Building



✔ School



✔ Factory (Line Entrance)



✔ Factory (Loading Zone)

## Current Estimation

### Face Recognition Market

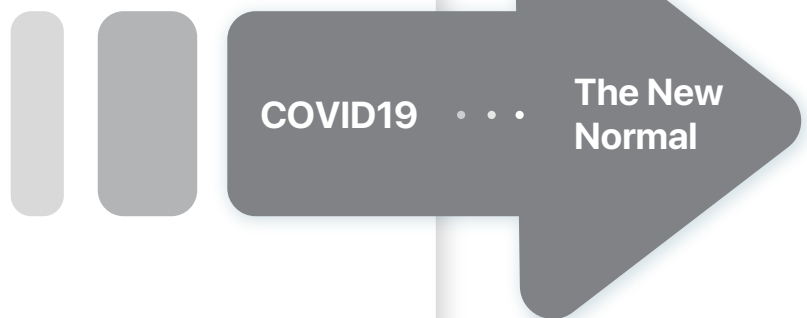
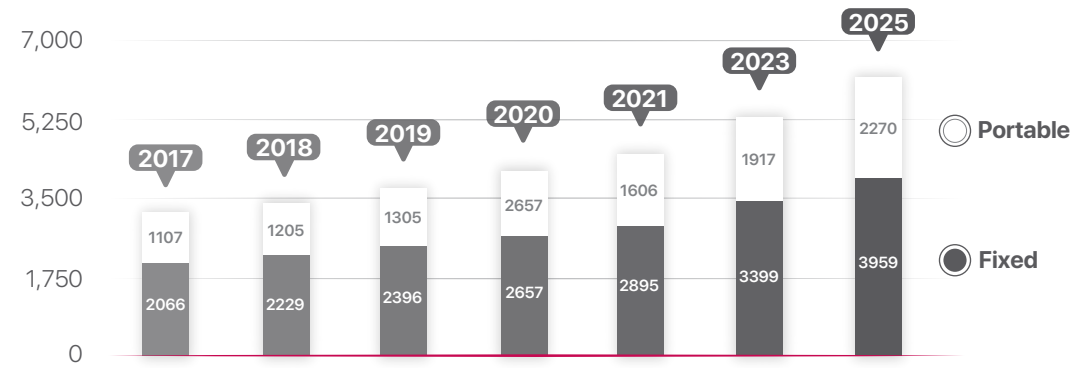
CAGR  
**18%**



### Thermal Scanner Market

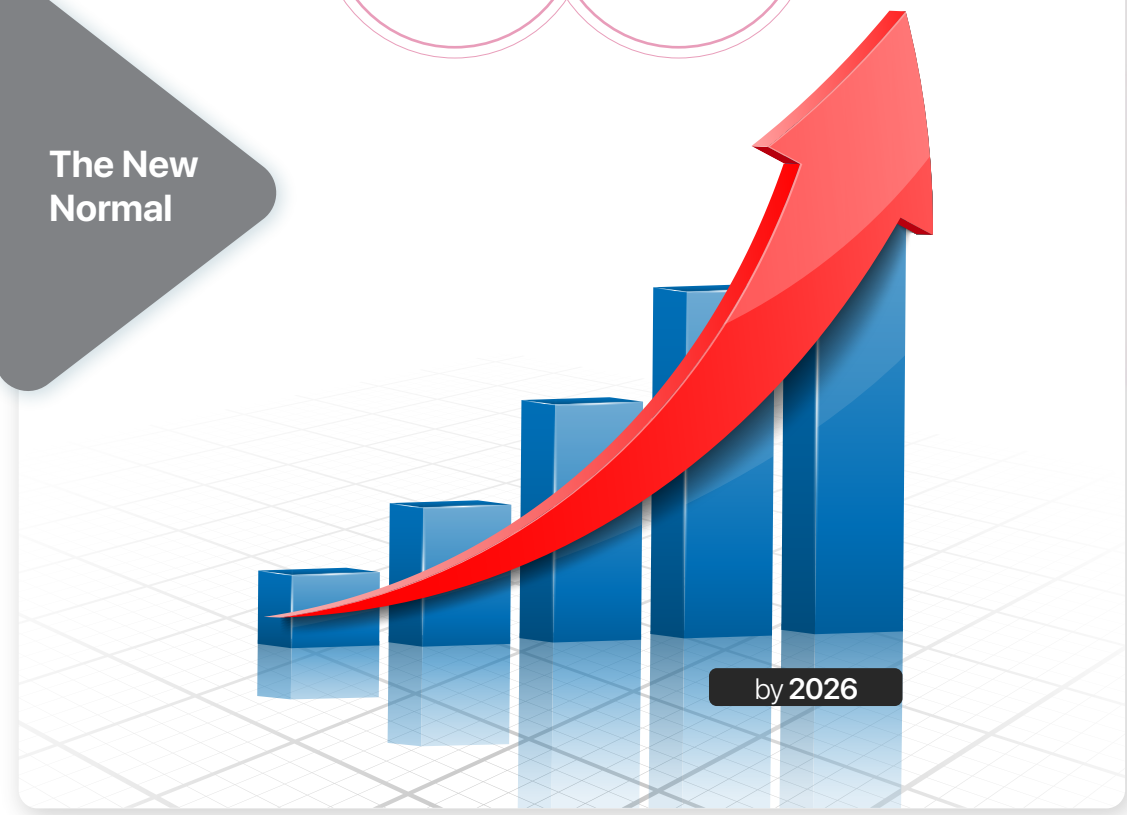
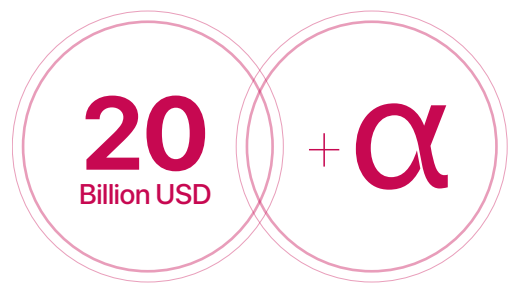
CAGR  
**8%**

\*Unit: Million USD  
\*Source: Global Market Insights




## Future Prospects

### Market Potential



2020 / 4Q	2021 / 1Q	2021 / 2Q	2021 / 3Q	2021 / 4Q	Launch Schedule
-----------	-----------	-----------	-----------	-----------	-----------------

<b>Face Recognition Thermal Sensing System</b>	Standard (1:1) (1st Generation)	Thermal Sensor + Face Recognition				<b>Available</b>
		Entry-Level (1:1) (2nd Generation)	Thermal Sensor + Face Recognition			<b>Q1 '21</b>
				Premium (1:N) (3rd Generation)		Thermal Sensor + Face Recognition

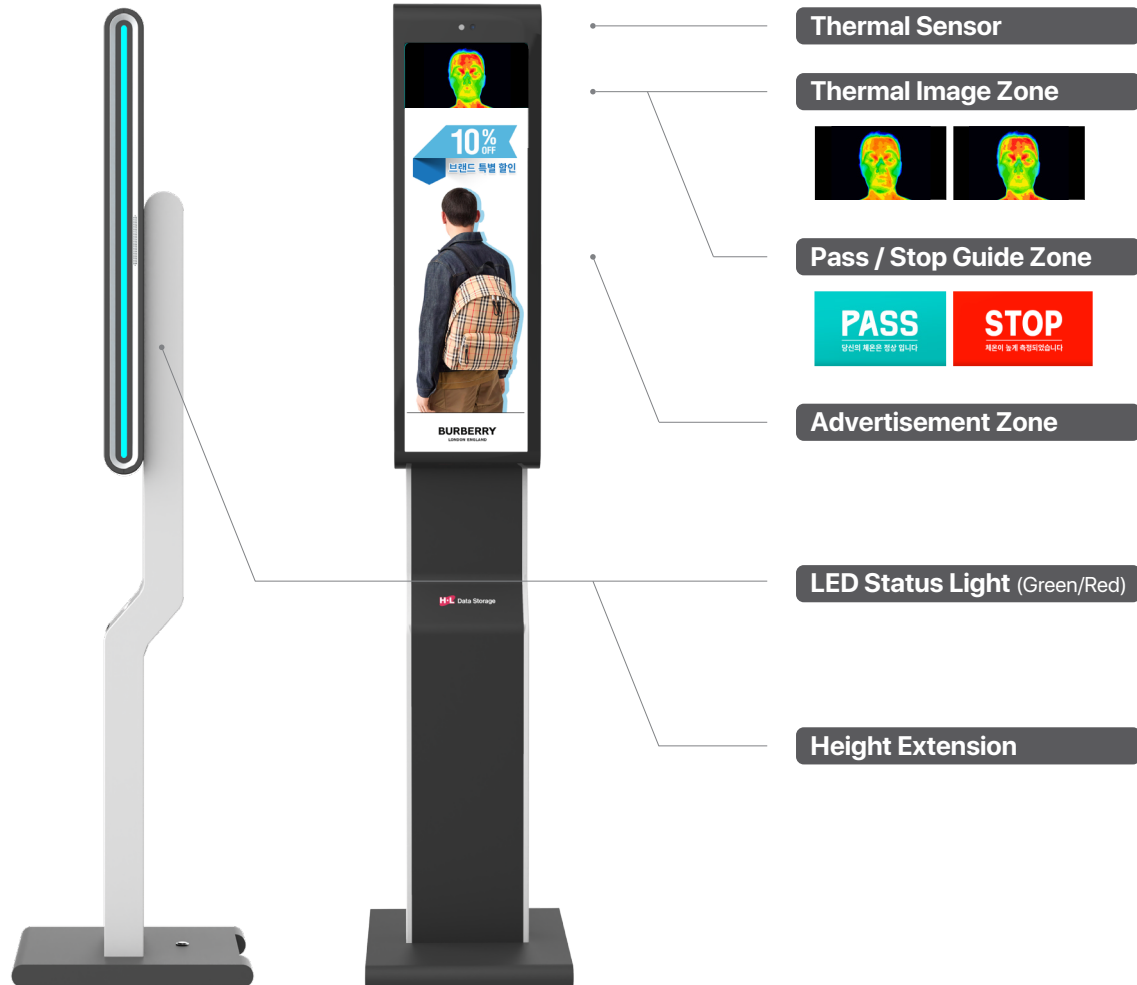
<b>Information Display &amp; AI Voice</b>		 29" LCD Stretch Signage + Thermal Sensor + (Face Recognition)		 Face Recognition + AI Voice Assistant	<b>Q2 '21</b>
					<b>Q4 '21 (TBD)</b>

**Build your own product with preferred features**

<b>Custom Products</b>	<b>Thermal Sensor</b>	<b>In-Touch Display</b>	<b>Face Recognition</b>	<b>AI Voice</b>	<b>Dust Sensor</b>	 <b>3 Months from Order</b>
	- Entry-Level (4x4/1:1) - Standard (32x32/1:1) - Premium (QVGA/1:N)	- 23/29 inch Stretch - 32/43/55 inch Standard - 55/75/86 inch Pro	- RGB/IR Camera - 3D Depth Camera (Palm/Fingerprint)	- Voice Beamforming - Other AI Voice Platform	- Standard 1.0/2.5/10 PPM - Fixed 1.0/2.5/10 PPM	

# Touch Panel Digital Information Display with Thermal Sensor

COMING  
SOON



## Features

- Temperature Scanning with HL365™ AI
- Advertisement Display
- [Optional] Face Recognition (Access Control)
- [Optional] AI Voice Assistant (Speaker Tracking)
- [Optional] Smart Order Kiosk (Touch Order)
- [Optional] Portable Power Station

## Specification

- 29" LG Touch LCD Stretch Display  
(Resolution 1920x540)
- Quad-Core RK3288 Chip for Android 7.1
- WiFi Mobile Connectivity
- I/O Interface  
Output : USB-C, OTG, Micro HDMI

## Safe Pass Products



Floor Stand  
Face Recognition  
+ Temperature Measurement



Table Stand  
Face Recognition  
+ Temperature Measurement



29" Touch Panel Display  
+ Temperature Measurement  
+ (Face Recognition)



## Extension Pack

Available Now



3D LiDAR Sensor  
(People Tracking /  
Mid Range Scanning)



Dust Sensor  
(Air Quality Monitoring)

Coming Soon



Digital Information Display  
(Smart Order Kiosk /  
Digital Signage)



AI Voice Assistant  
(Speaker Recognition)



3D Depth Camera  
(Personal Identification /  
Close Range Scanning)

## Possible Solutions



### Retail Solution Package for a Safe Environment

- # COVID19 Quarantine Measure
- # Gate Screening / ID Check
- # Contact-free Ordering
- # Contact-free Serving
- # Occupancy Monitoring
- # Air Quality Monitoring
- # Virtual Fitting
- # Payment Authentication
- # In-Store Analytics (Footfall, Dwelling)

- |                     |                |
|---------------------|----------------|
| ■ Restaurant        | ■ Office       |
| ■ Café              | ■ School       |
| ■ Convenience Store | ■ Factory      |
| ■ Building          | ■ Public Space |



# Sales Contact

---

## Korea / APAC

- Hitachi LG Data Storage Korea, Inc.
- 08503 서울 특별시 금천구 가산디지털 1 로 189 LG 가산디지털 센터
- Email: sensorsales@hlds.co.kr

## US / Canada

- Hitachi America, Ltd.
- 2535 Augustine Drive, 2nd floor, Santa Clara, CA 95054
- Email: masaki.nagayama@hal.hitachi.com

## Japan

- Hitachi LG Data Storage, Inc.
- 1080022 4 F MSC Center Bldg., 22-23,  
Kaigan 3chome, Minato-ku, Tokyo, Japan
- Email: sales@hlds.co.jp

## EMEA

- Hitachi LG Data Storage Amsterdam Office
- Keienbergweg 77, 1101 GE Amsterdam, The Netherlands
- Email: johnkyoo@hlds.co.kr