

Toshiba solutions are custom-made for every customer.

**TOSHIBA**

# Logistics System Solutions

We deliver optimal automation solution which fits cutomers' environment through on-site evaluation to improve operational work flow.



We deliver optimal solution which fits every customers' environment.

To find issues in current work flow

## Survey

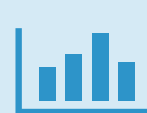
Site survey



Logistics process analysis



Operation simulation



We examine and analyze the existing operation to find spots to be improved. We simulate and analyze the expected effect of automation.

To provide comprehensive solution for every customer

## Design

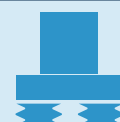
Material-handling equipment design



WMS connection



Customized gripper



We provide the optimal equipment and layout based on the survey result and design the best fit solution for every customer, including Warehouse Management System connection and customized gripper.

To maintain stable automation environment

## Operate

Remote monitoring



Functional update



System maintenance



We provide maintenance service to keep secure operation of the structured system, including remote monitoring, regular maintenance service, and functional update.

**>> Toshiba will answer to your problems. Please contact us.**

Info available online



**TOSHIBA INFRASTRUCTURE SYSTEMS & SOLUTIONS CORPORATION**

Security & Automation Systems Division International Sales & Marketing Department

<https://www.toshiba.co.jp/sis/en/scd/robo/robo.htm>

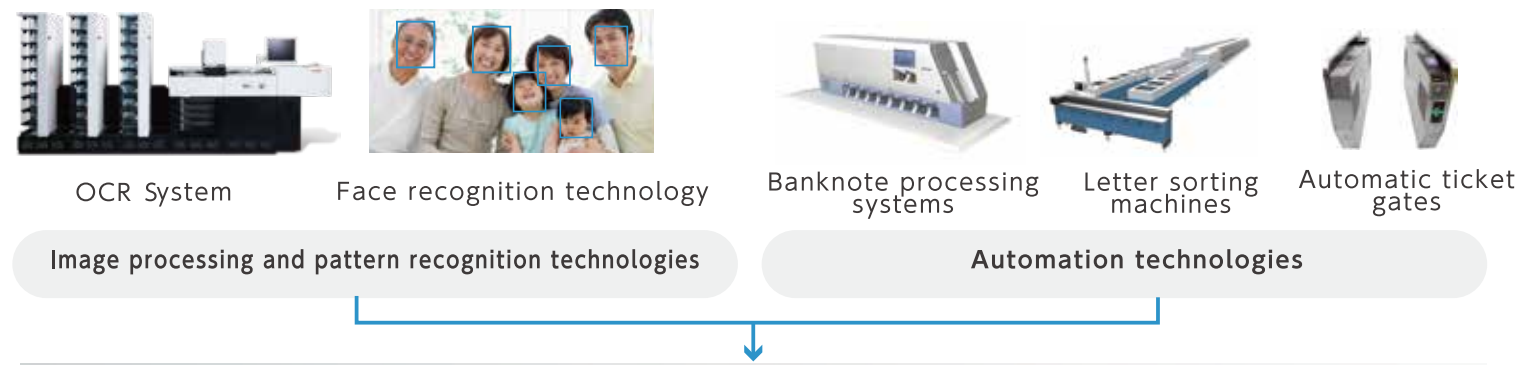
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# Toshiba offers unique proposals, drawing on its expertise built up through years of experience in manufacturing.

Reliable logistics technologies developed through long experience in the manufacturing industry. Through experience in the manufacturing industry, Toshiba has developed and commercialized a wide range of technologies, including character recognition, efficiency improvement, and robot gripper manufacturing technologies. By combining these technologies, Toshiba creates new core technologies that will elevate logistics to the next level.



## Evolution to core technologies that support logistics

### Efficient parcel loading

#### Image Recognition

Reliable recognition using various sensors

A unique analysis technique using various sensors makes it possible to recognize each parcel. This data is used to achieve efficient loading operations and thereby improve work productivity.

### Efficient control plan

#### Intelligent Function

Intelligence to create efficient control plans

Real data are converted into virtual models to simulate operations even under complicated conditions.

### Parcels of various shapes and sizes

#### Robot Grippers

Selection of the optimum gripper for each parcel

The optimum robot gripper is selected according to the shape and weight of each object. It is possible to pick up randomly stacked parcels.

## Toshiba offers an optimum solution according to the environment of each customer.

Utilizing the above core technologies, Toshiba offers proposals of robots and other solutions to contribute to the tasks such as unloading, picking, and loading.



# Toshiba establishes an optimum logistics system in cooperation with customers.

## Consult Toshiba if you have any difficulties in automating your logistics operations.

Every customer has his or her own difficulty in the automation of logistics. Toshiba addresses any small issues conscientiously. Feel free to contact Toshiba. We are pleased to serve you.

Recognition	<p>Tedious preparation is necessary for parcel scanning, isn't it?</p>	<p>Automatic parcel recognition with no need for prior registration</p>
Recognition	<p>Is it possible to recognize each one of the tightly stacked parcels?</p>	<p>Each parcel is recognized by unique analysis technique using various sensors</p>
Intelligence	<p>Do robot packing systems leave a lot of space unoccupied?</p>	<p>Robot fills unoccupied space in a container by recognizing each parcel</p>
Intelligence	<p>Can robots think like humans to stack parcels neatly?</p>	<p>Stacking parcels efficiently with measuring their size and weight</p>
Picking	<p>Can robots pick heavy goods such as beverage?</p>	<p>Unique gripper that can easily handle cartons of up to 30 kg</p>
Picking	<p>I wonder if parcels with lines of perforation might be torn.</p>	<p>Careful picking by gripping on 2 sides</p>
Picking	<p>It is impossible to pick tiny parcels, isn't it?</p>	<p>Suction grippers capable of handling small boxes</p>
Picking	<p>I am afraid that robot may break items when putting into a container. Do you have such problem?</p>	<p>Careful handling through haptic control</p>
Picking	<p>Is it possible to handle parcels with a wide range of weight?</p>	<p>Unique gripper that can handle parcels with weights from 0.5 kg to 20 kg</p>