

3-17. PBB(Passenger Boarding Bridge)



Category	Area	Aircraft Docking and Passenger Boarding Bridges
	Theme	Improving air traffic efficiency

Product Summary

- Fully Automatic Docking System (Intelligent PAXWAY™)
This system consists of 2 cameras, an image processor and a laser rangefinder, which incorporates artificial intelligence, detects aircraft doors regardless of aircraft parking errors and run automatically up to approx. 2cm ahead of the aircraft door with single push of a button.
- Remote Control
Remote control is possible as an upgrade feature of the fully automatic docking system. This system allows the operator to drive 2nos PBBs simultaneously from an apron far from the CAB.

Features

- Fully Automatic Docking System (Intelligent PAXWAY™)
 1. Prevents misoperation using AI and image recognition technology.
 2. Stable docking and undocking regardless of the skill level of the operator.
 3. Possible to reduce training time for PBB new operators.
- Remote Control
This system enables remote operation of multiple PBBs from a control panel installed on the rotunda column of the PBB, reducing the workload of GSE works and saving manpower. In the future, this system can operate PBBs remotely at multiple Gates from the central monitoring room in the terminal building, reducing the number of operators assigned to each PBB.

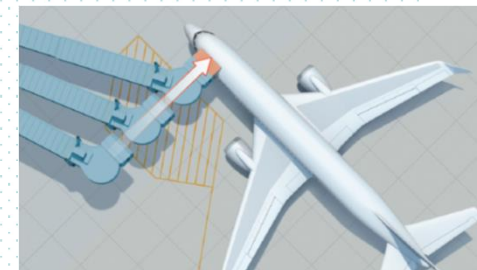
Applications

- Apron

Past Installations

- Fully Automatic Docking System (Intelligent PAXWAY™)
Japan: Osaka (Itami) Airport
Overseas: Changi Airport(Singapore)
- Remote Control
Overseas: Changi Airport(Singapore)

- Fully Automatic Docking System (Intelligent PAXWAY™)
Docking Procedure
 1. 1 Push "Auto Start"
(No selection aircraft model required.)
 2. Detects the aircraft door and runs automatically, stopping 1m away.
 3. Again detects door image, automatically completed docking.
(Gap is approx.2cm from fuselage, automatically lower canopy, enable the Auto-Level mode.



- Remote Control
Achieving the world's first "Autonomous fully remote control PBB" without the selection of aircraft model at Changi Airport and contributed to Smart Airport Operation. Executed actual aircraft docking test using door mock-up and retired B777 from Sep/2022 to Mar/2023. The live aircraft operation using remote control had started from Aug/2023.

Contact Information

ShinMaywa Industries, Ltd.
Parking Systems Div.
TEL: +81-3-3843-3410
E-mail: hayashi.y1@shinmaywa.co.jp
URL: <https://www.shinmaywa.co.jp>

