Leading you safely to the gate

Parking Control System for Automated Gate Management
Honeywell Airports Business

Increases in passenger traffic require higher gate efficiency and optimized throughput - Honeywell’s visual docking guidance system VDGS helps to optimize airport capacity.

Honeywell - Leading you safely to the gate

About Honeywell

All our products are in compliance with the recommendations of the ICAO and FAA.

Honeywell is renowned throughout the international aviation business for innovation, reliability and integrity. Our customers benefit from solid and long-time project management experiences and comprehensive system know-how. With Honeywell, they have a technically leading and future oriented partner at their side.
Managing Uncertainties

Airports around the world continue to face pressure to expand their capacities to handle increasing numbers of flights due to increases in air travel demand. During daily airport operations the arrival and departure times of flights may vary compared to their original schedules. This may require reassignment of gates to capture the dynamics of flights and gate status to enhance the level of services provided to passengers.

For busy airports with high numbers of arrivals/departures, the assignment decisions must be made within a short time to capture all the changes. Therefore, efficient gate assignment is increasingly important because it would allow an airport to increase the capability of existing passenger terminal facilities and resources, as well as to cope dynamically and proactively with sudden changes which often take place in real-time operations. Through proper planning of gate assignment, level of service offered by airports can be enhanced.

Parking Control System

Honeywell Parking Control System (PCS) is an automated gate management system that delivers higher gate efficiency and optimized throughput ensuring smooth operation of arrivals/departures at gates. Working in tandem with VDGS, it provides a comprehensive control and graphical overview of the complete docking system at the airport. PCS hosts the interface to airport LAN and VDGS LAN and centrally administrates all local docking positions and monitors their individual data like real-time gate status, alarms, reports, statistics, conflict management, flight plan etc. A standard interface to the FIS allows data communication regarding gate occupancy (type of aircraft, expected arrival, etc.). In case of a communication breakdown with the FIS, the system can also be operated in local mode; all flight movements will then be carried out manually.
Key Features

- **Multiple Work Positions**
  PCS system can deliver itself to multiple work positions with dedicated HMI like:

  - Gate Controller Work Position – The Gate Controller Work Position provides control and graphical overview of the complete docking system. The status of all docking positions can be monitored and controlled. Multiple Work Positions can be operated in redundant configuration.

  - Maintenance Work Position – Maintenance Work Position provides status of docking positions for notification to service engineers in case of equipment failure.

  - Airport Inspection Work Position – Provides control and visual overview over the webcams installed at each docking stand.

  Work Position status area to show if corresponding systems are available or down.

- **Live Video Gate Surveillance**
  Optional webcams integrated into the system can be used for apron monitoring purposes. On a separate Parking Control Video Computer (PCVC) simultaneously displays the pictures of up to nine selected cameras on a split screen. In case of a failure (emergency), the system automatically shows the enlarged camera picture of the respective position at the center of the screen.

  Dedicated Video area enabled with drag and drop feature for easy retrieval and storage of images and videos. The Airport Video Inspection Computer is a working position to monitor the docking stands visually by the images provided by VDGS webcam.

- **Real-Time Gate Status**
  The PCS display shows the status of the individual gates and connected hardware (e.g. computer, network, PDU, MCB, etc.), and the current flight plan entries.

- **Alarms**
  The PCS generates alarms when:
  - The boarding bridge is not in the correct parking position and likelihood of collision with aircraft during docking.

- **Remote and Manual Docking Control**
  The PCS system provides for both Remote and Manual docking control (semi-automatic mode) of the docking actions.

- **FLIGHTPLAN Editor**
  Flightplan editor is auxiliary tool (fall back mode) which can be used for manually editing the flight schedules for docking when link to FIS is down.

- **Stand Conflict Management**
  The PCS turn on the stand conflict button when a stand conflict is detected such required wing tip clearances for two selected aircrafts at adjacent stands is violated.

- **Data Logging**
  The PCS logs ONBLOCK / OFFBLOCK data for individual gates, the respective times, as well as maintenance and status information. The data can be analyzed subsequently by the reporting function of the VDGS and input into FIS for calculation of Airport services related charges.
• **Video Management**
The PCS provides for video sequences management, storage and retrieval. Video sequences are event controlled:
- Stand is docking active.
- From docking activation to aircraft detection
- Stand is docking, aircraft detected and guided by the system up to completion of docking procedure
- End Docking, ONBLOCK, PARKED
- Alarm Images

**Display Configuration Tool**
This interface enables the texts and events for the VDGS display to be configured for each docking position.

• **Reports**
The PCS can generate reports for:
- Docking statistics
- Alarms
- Up-Downtime
- Component Status

• **User Management**
The PCS provides for different levels of user operation such as Operator, Super Operator, Admin, Video Operator and Maintenance. Users have different permissions which can be enabled or disabled on demand.

• **Interface with other Airport sub-systems**
The PCS can also provide for interface with other airport subsystems like PBB, 400Hz, PCA, fuel etc.

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**Key Benefits**
Parking Control System delivers several benefits to airport operators like:
- One View of Gate Process - By linking all equipment used in the turnaround process to the central information repository PCS enables the automatic retrieval and exchange of consistent and accurate operational data, status and statistical information.
- Automated Gate Allocation & Management – In tandem with Airport FIS, PCS can automatically manage gate assignment and accommodate last-minute changes without having to wait for the marshal.
- Shorter Turnaround Time – By One View of gate process, enables for faster turnaround and maximization of terminal facilities usage.
- Accurate Information – Provides for accurate information of data that is crucial for billing purposes, incident analysis etc.
- Measurement of Productivity – Logs a repository of information for measuring the productivity and performance of personnel, equipment and gates.

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**Technical Specifications**
- Operating system – Windows 7
- User Interface – customizable HMI for airport requirements
- Interface - Ethernet
- Protocol supported – OPC
- Number of gates supported – up to 150
- Remote connectivity – Thin client based (web browser)
- Fault tolerance Mechanism - Single fault tolerance (build into the system)
- Multi Languages Support
Find Out More
To learn more about Honeywell Airports Business, visit www.honeywell.de/airportsystems/

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